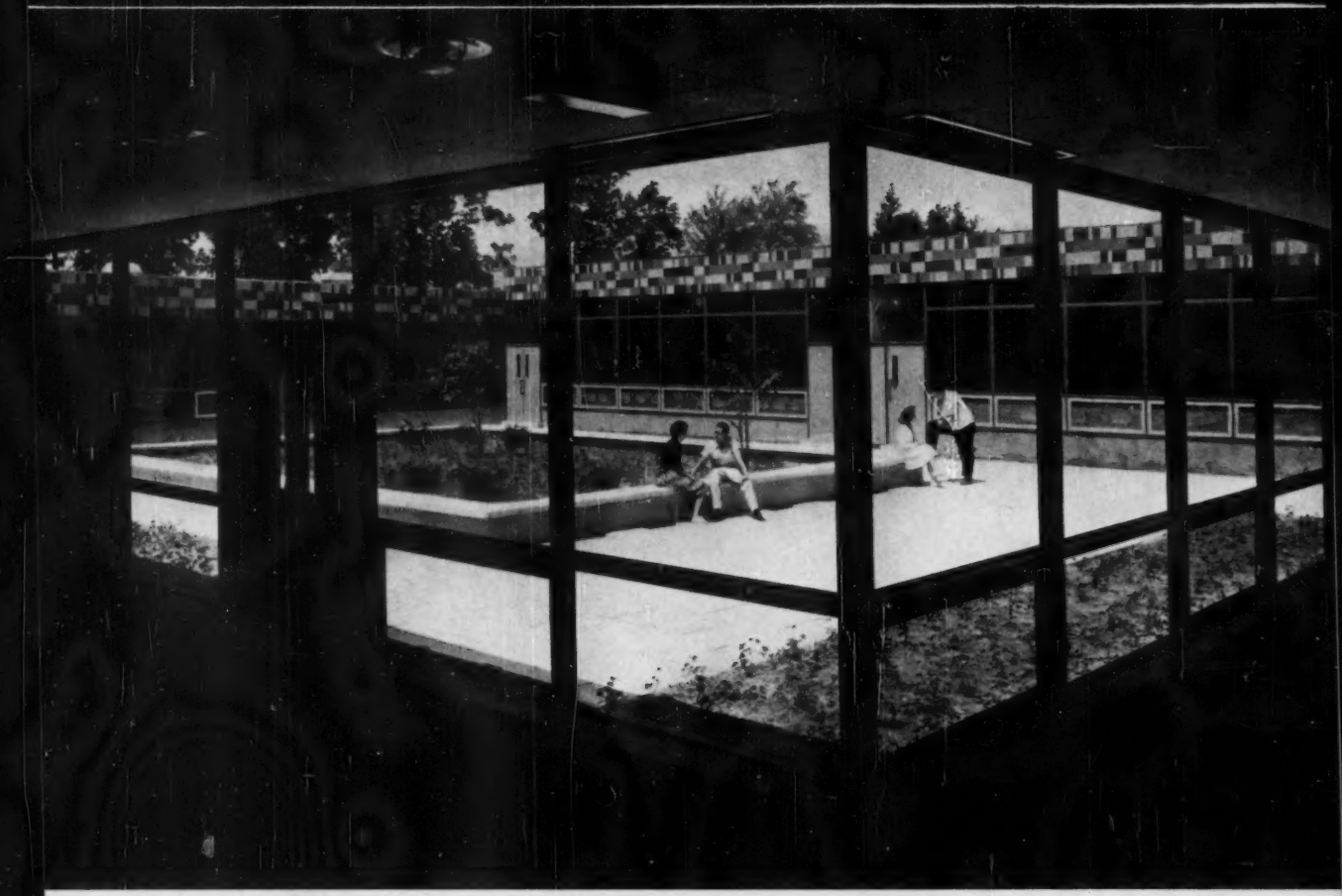
the
AMERICAN SCHOOL BOARD JOURNAL
a periodical of school administration



Medill Bair High School (p. 20) in the Pennsbury system: a two-year-schools plan that enables educators to concentrate on a narrower range of adolescence

November, 1960

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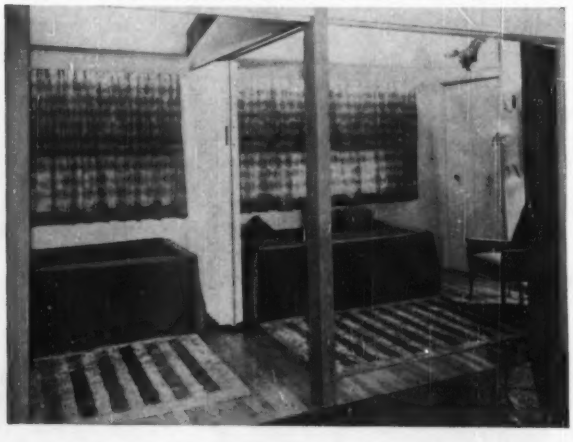

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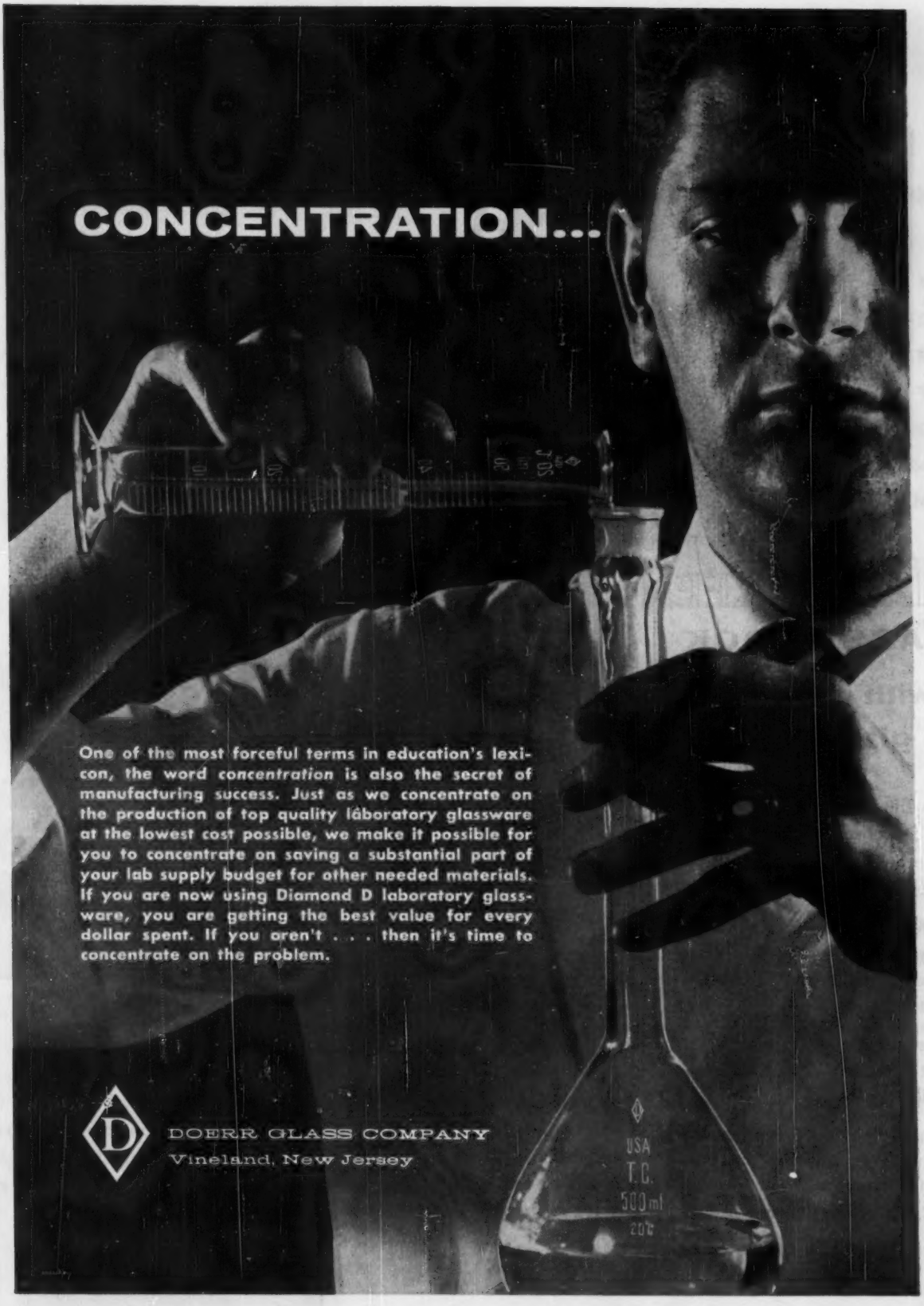
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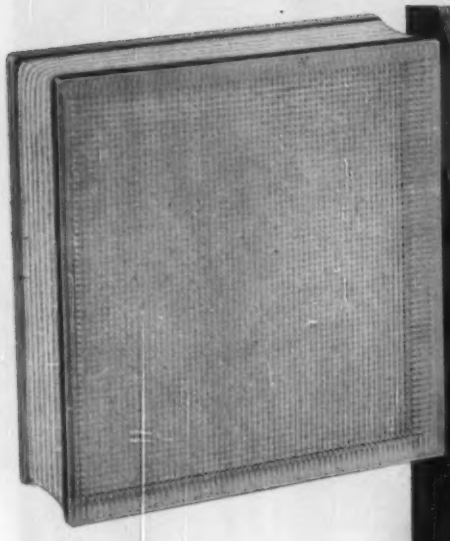

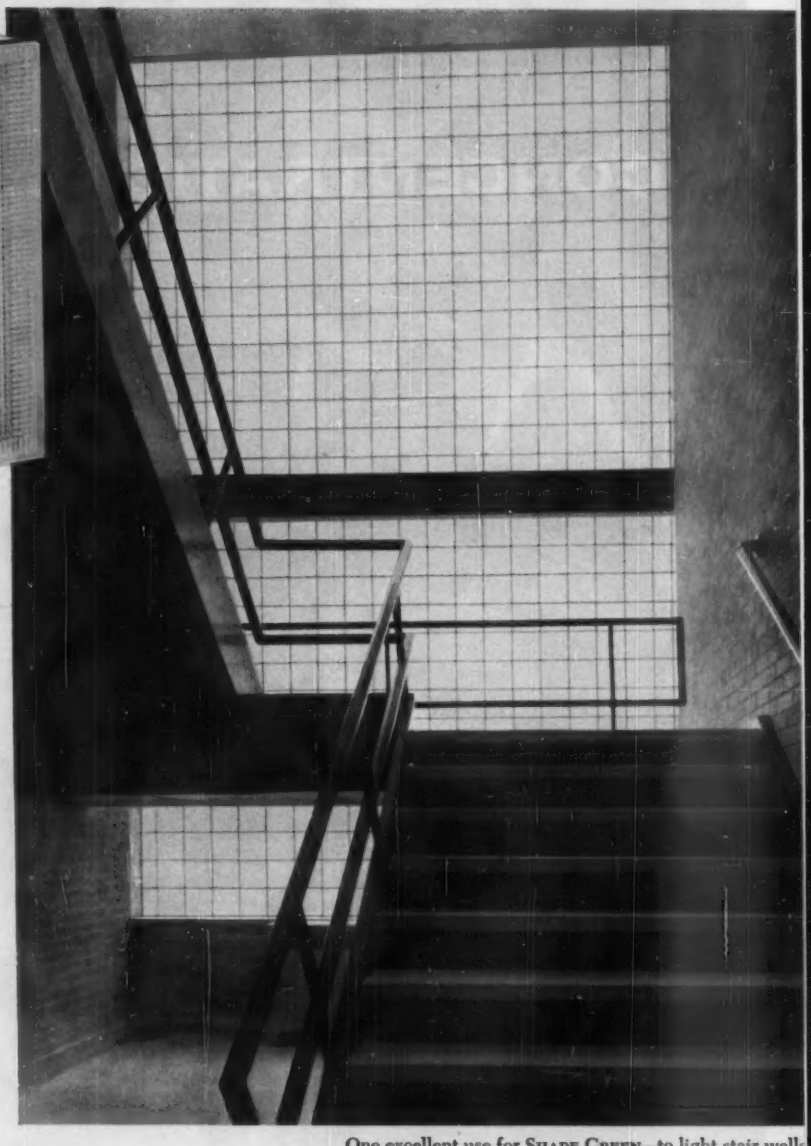

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November, 1960 Vol. 141, No. 5

Use the Board Handbook for Policy and Rules, Firth 13
School Discipline by Plan, Cohler 15
Longview's Functional Citizens Committee, Slayton 18
The Redondo Language Lab, Brigham 19
Medill Bair High School, Muschell 20
School in the Round, Orthaus 24
Notable New Schoolhouses 26
Mt. Diablo's Flexible Administration Building, MacDonald 28
Determining Instructional Space Needs for Junior Colleges, Patterson 29
Economical Hints for Building an Instructional Materials Center, Church 32
How to Evaluate School Building Cost 33
Planning Industrial Education Facilites, Dunton . 34
A Potential Solution of School Sewage Problems in Fringe Areas, Post 37
Word From Washington: Meeting the Emerging Threats to Local Curriculum Control, Exton . 38
Improving the Peoria Schools, Bloom 52
The NCSC Convention in Toronto 54

Your JOURNAL for November, 6
Surveying the School Scene, 8
Editorial, 40
N.S.B.A. Report, 42
Personal News, 47
New Books, 48
Association News, 54
New Products, 56
Reader's Service Section, 61

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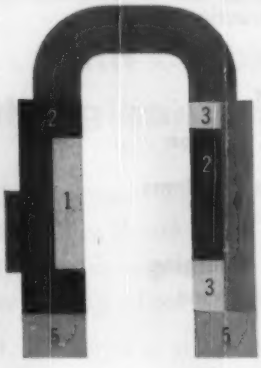

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Your JOURNAL *for November...*

We hope you're profiting from our recently established accent on the school planning and building milieu. More than a half dozen reports are bound to have at least one or two among them that will hit the right vein in your own district's stake. Prize nuggets in the November building "strike":

1. And the school goes round and round at Hereford, Pa., where school life is not exactly a merry carousel but it is considerably brighter and somewhat more solvent because of an interesting design. The shrewdest of school board sleuths might deduce the shape of the plant from the title alone (pg. 24), but even he will do well to read on.

2. You wouldn't go to the butcher's for steaks and come home with hot dogs. But you might find yourself with a handful of problems if you're planning industrial arts facilities for one of your schools and are unfamiliar with the machinery and specifications you'll need. Good planning counsel is offered (pg. 34) by an expert in the field.

3. The junior college is a community entity that demands your scrutiny as a board member. If you are considering one, you will benefit from the article (pg. 29) by the field representative of the California state department of education's planning bureau.

Besides additional building reports, there are general articles, headed by Gerald Firth's helpful hints (pg. 13) for board policy and rule co-ordination in administrative doings. Boards often have their own handbook, but ostrich-like ignoring of its relationship to administrative practices leaves the rest of the district in confusion.

School discipline is an old problem. To the question of the flogging of school boys, Dr. Samuel Johnson replied, "What a man loses at one end he gains at the other." Somewhat less vivid but quite sound is Dr. Milton Cohler's description of several practical aims on the subject (pg. 15).

And don't forget the regular departments — including the association news column with the editor's report on the NCSC convention in Toronto.

for December...

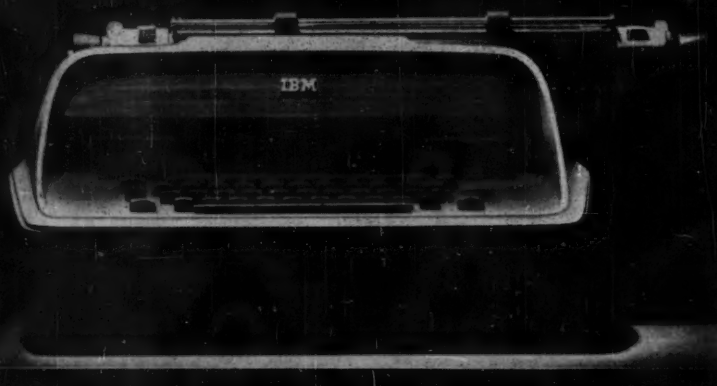
A former superintendent gives a fascinating account of specially designed facilities for physically and mentally handicapped children. The Racine, Wis., elementary and orthopedic school has excellent facilities for both normal and disabled children, and the results produced are as enlightening as they are encouraging.

The Editor

OUR COVER...

Medill Bair High School is built adjacent to and in fact connected to the William Penn Junior High School in Fallsington, Pa. The 2-2-2 plan has been found to be exceptionally beneficial to youngsters and, consequently, to educators, practically and psychologically.

(For more information from advertisers, use the postcard on page 61)



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FEDERAL AID IN THE POLITICAL PLATFORMS

In the debate on political issues recently, Senator Kennedy said he supported federal aid to education and federal aid to teachers' salaries without which teachers would not be adequately compensated. Mr. Kennedy said on reply to Vice-President Nixon that the issue before the Senate was that the money would be given to the states. "The states then could determine whether the money would be spent for school construction or teacher salaries. I voted in favor of that proposal and supported it strongly because I think that that provided assistance to our teachers without any chance of federal control."

Vice-President Nixon was asked about his "crash program" for school construction and his statement some time ago that salaries paid teachers were nothing less than a national disgrace. Mr. Nixon said, "We need more pay for teachers, but the important thing is how to do it." The way to get teachers' pay increased is to support legislation for school construction. Federal funds, said Mr. Nixon, should be earmarked for servicing debt already incurred for past construction by some school districts; servicing debt incurred for new construction; and grants that matched with state funds would provide "pay-as-you-go school construction." He stressed the need for increased federal loans and grants for educational research and teaching aids, expanded national college scholarship program, tax reduction on tuition costs, and assistance to teachers planning advanced study. He urged more grants for aid to vocational education, libraries, adult education, and schools for the handicapped.

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AMERICAN EDUCATION WEEK

American Education Week will be observed November 6–12, 1960. President Eisenhower in his proclamation setting the observance urged parents to study the programs of the schools and to demonstrate their support for the work of dedicated teachers.

Among the publicity material issued by the NEA is one entitled, "What Happens at School Board Meetings?" It reads:

"Your school board may be deciding whether to add French or Russian to the elementary-school curriculum . . . how to keep that skilled science teacher from leaving to take a higher-paying job . . . whether to broaden and strengthen the curriculum . . . whether to increase the safety in all school buildings.

"School board meetings are personally important to you—their decisions affect you and your child in so many ways.

"Make up your mind to attend the next school board meeting in your town. But first—visit your schools during American Education Week."

FEWER SCHOOLS

Commissioner of Education Lawrence G. Derthick has recently reported that the number of elementary and secondary school systems in the nation is smaller than at any time in recent history, while the number of pupils in these systems has reached an all-time high. The figures show that the number of elementary and secondary systems in the 50 states and the District of Columbia fell to 42,428 in 1959–60. Of this number, 7029 operated no schools. The number of pupils in kindergarten through grade eight reached an all-time high of 27.8 million in the same year, and is expected to reach 28.6 million in 1960–61. The total number of systems is 20 per cent below the 52,937 in 1956–57, and is a reduction of almost 40 per cent from 1951–52. Systems with the second largest enrollment (12,000 to 25,000) had the largest single increase, 31 per cent. Those with the largest enrollment (25,000 or more) increased 13 per cent. Systems with an enrollment of 1,200 or more increased 13 per cent. A total of 19,369 systems enrolled fewer than 150 pupils each in 1959–60.

FEDERAL AID

The biggest lobby spending in Washington this year backed legislation that was never passed by Congress, the Congressional Quarterly of lobby spending shows. The leading education lobby spent more than $77,000 for the school aid bill, which died in the house Rules Committee.

The National Education Association, representing about 700,000 teachers and school administrators, topped all other groups in spending in its drive to obtain passage of a school aid bill.

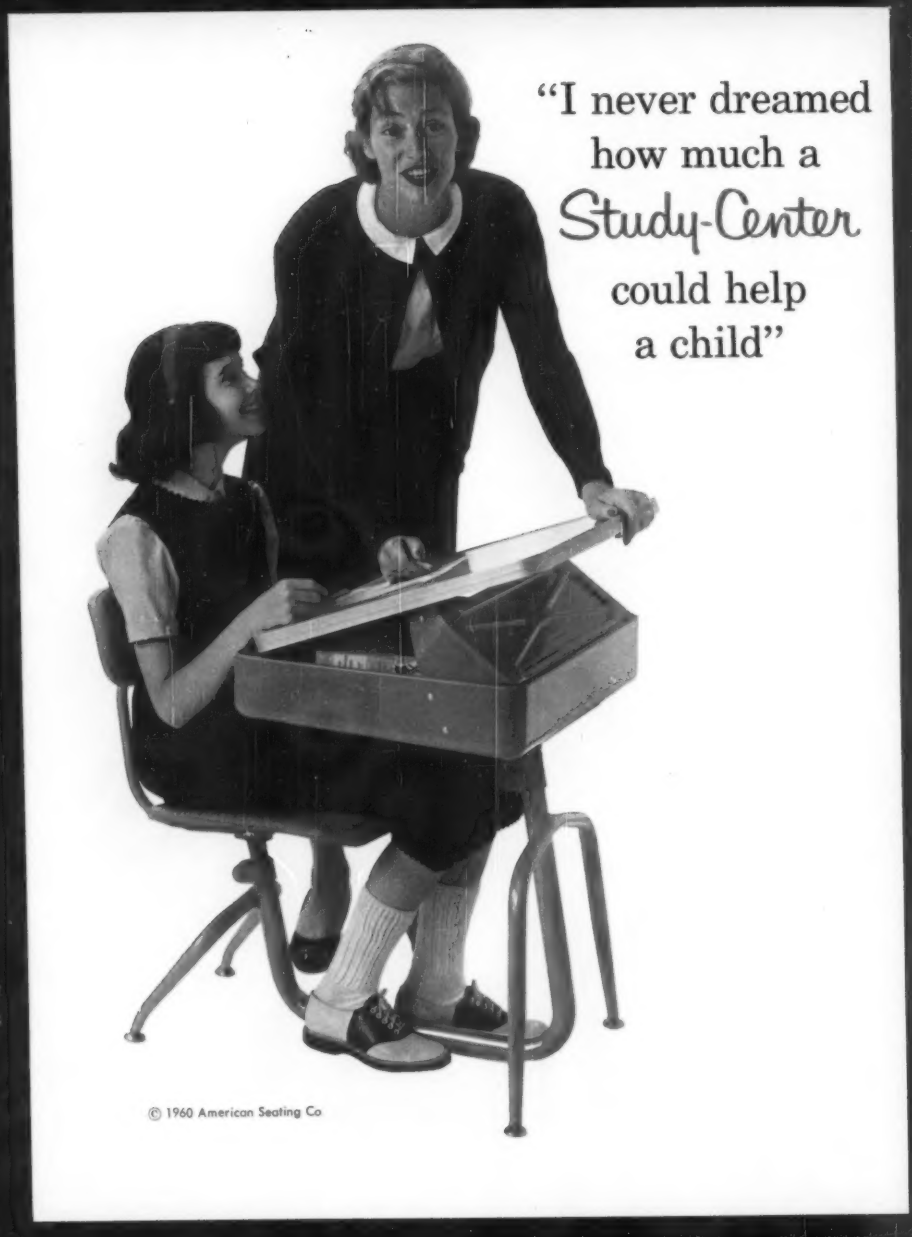
INTEGRATION ON REVIEW

The integration picture in the Fall of 1960 reveals these developments:

■ New York, N. Y. The board of education has announced a new policy that will no longer regard neighborhood boundaries as immovable barriers to pupils seeking admittance to schools. By permitting some Negro and Puerto Rican junior and senior

(Concluded on page 55)

It gave me a new lift out of life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"I'm the luckiest teacher in town.

"The Study-Center is attractive and colorful — you'd be surprised how much more comfortable and relaxed this makes a classroom look and feel. It's neat and uncluttered, with a marvelous roomy book-box.

"It's all in one piece, yet surprisingly light. I can have my pupils rearrange their Study-Centers into new groupings within minutes . . . and much as they'd like to, they just can't make much noise doing it!

"It's comfortable. You can be sure of this when you see a roomful of children *not* slumping, *not* squirming, *not* fidgeting.

"The seat swivels both ways, so the children can move about freely without disturbing others. The top can be sloped or set level — whichever angle is best for vision and posture. Both seat and desk-top are adjustable. Believe me, it's so much more satisfactory to fit the desk to the child than the child to the desk.

"How much difference does a Study-Center make? Until we moved into our new school, for example, Johnny Burton was definitely a teacher's problem. He not only wouldn't do his best — but he created disturbances which disrupted classwork and kept others from doing their best.

"Since he's had an individual Study-Center — a desk that doesn't restrict his movements — he's not noisy any more, and his work is improving.

"I have another pupil — a gifted young girl. I couldn't get her to raise her eyes more than two inches above the top of her pencil at her old desk. She's been sitting up like a doll since the first day she got her Study-Center. Posture problems, reading problems, and many emotional problems with students have vanished.

"I think we sometimes forget how many hours children spend sitting . . . learning to concentrate, learning to get along with one another, learning to use their hands and their minds. A desk has to be a very versatile piece of furniture to fit in with all of the many ways we teach and learn.

"I've mentioned this to mothers lately when they've remarked about the improvement in their children's grades and attitudes toward school. And when our discussions turn to improving evening study habits, do you know what I tell them? Get Study-Centers for their children's rooms. Study-Centers can work the same wonders at home as they do at school."

Point to remember: Schools are built to give students a place to sit and learn (they'll *sit* 15,000 hours, kindergarten through college). Thus, the selection of school furniture demands your serious consideration. School furniture is the *most important* single equipment purchase you're called upon to make that affects both the physical and intellectual development of children. So when it comes time to buy furniture, think in terms of eager, ambitious youngsters.

Study-Center is a trademark of the American Seating Company.

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Study-Centers give students a lift for life.

Eliminate posture problems of old-fashioned furniture.

Once a Study-Center Desk is adjusted to a child, posture problems disappear forever.
With a Study-Center, it's actually an effort to slouch or slump.
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the AMERICAN SCHOOL BOARD JOURNAL
November, 1960

The staff can act within a framework that saves repeated rulings and guides the administrator to know what course of action the school board might be expected to take. . . .

Use the Board Handbook for Policy and Rules

GERALD R. FIRTH
Associate Secretary of the Western New York School Study Council
and
Assistant Professor of Educational Administration, The University of Buffalo

Rather than repeatedly making identical decisions on similar matters, school boards are increasingly developing policy handbooks to guide administrative action. Long advocated by educators, this procedure often creates new and time-consuming problems. Board members frequently have difficulty determining the difference between a statement of general policy and the administrator's rule for putting it into operation.

The phenomenal growth of the American public schools in size, cost, and service to their communities has increased their complexity and the time and effort required to guide the total educational enterprise. School personnel have realized increasingly the value of written policies and regulations which quickly explain procedures and relationships. Moreover, handbooks help to enhance public understanding of the schools.

For years many boards of education and public school personnel operated in an informal fashion. Most boards have written "statements of policy," adopted some time ago, which are typically composed of by-laws concerning the way the board itself intended to operate. A district which used handbooks even for students and teachers was unusual. Recently many schools have seen the need for codifying rules and procedures for them. However, the trend toward written school board policies involving school administration has been quite slow by comparison.

The board policy handbook is a basic element in improving school operation. Many of the data that board members receive are presented during meetings. Many reports are oral. Hence, although members are given much information of various types, it is generally not organized or available to them in advance.

Myriad decisions must be made each month in the operation of a school system. The board of education could not make them all even if its members met every night. And it should not try.

Details Derail Program

Moreover, attention to details produces loss of perspective. If the board attempts to consider closely every minute factor before deciding each matter, it may lose control of the educational program because sufficient time is not available. The same result occurs if each board member atempts to specialize in some particular aspect of school operation, e.g., finance, buildings, personnel and curriculum.

It has become accepted more and more that the board of education should devote its energies to establishing a framework within which school personnel function. This frees the board from ruling repeatedly on various specific problems. Yet it guides the administrator in following the course of action the board might be expected to select. These policies are interpreted in respective handbooks to administrators, teachers, students, and others through appropriate rules and regulations.

Although much has been written emphasizing the need for school handbooks, little concrete assistance has been offered. In response to the interests of member districts, the Western New York School Study Council of the University of Buffalo has moved to remedy this situation. Over 500 representatives, including board members, administrators, teachers, and lay citizens, engaged in a project four years ago (1955–56).

An analysis was made of some 150 handbooks then being used throughout New York State. This year a second and smaller group reviewed the report of the previous study and incorporated the experiences of many schools which had adopted handbooks during the interim period.

In the *Resource Manual for School Handbooks,* recently published by the Council, careful attention is given to distinguishing policy from rules and regulations.

The handbook of the board of education is generally composed of the by-laws which govern the operation of the board itself and policy statements covering the total school enterprise. The respective handbooks for administrators, teachers, students and/or other personnel contain rules and regulations which translate the policy into appropriate action *at any particular level.*

While it is often difficult to distinguish between a policy and a rule, the Manual supports the opinion of other authorities to separate them on the basis of discretion allowed. A policy is considered *a guide for discretionary action;* a rule is the *specification of a required action.* If a statement leaves no room for the exercise of discretion, it is not a policy. This does not mean that policy statements should be so broad and general that those who are to act under them must spend a great deal of time interpreting the intended meaning. Policies can have flexibility and yet provide definite guidance. Such statements should be clear, brief and specific.

No Rules from Board

The distinction between policy and rule is basic from the standpoint of effective operation. Rules necessarily must be broken to meet unusual situations. If the board of education makes rules, one of two conditions result: (1) Individuals are forced to violate the regulations without permission because the board usually meets only once a month, or (2) the board continuously receives requests to consider exceptions in individual cases.

The Manual points out that an administrator has great difficulty interpreting the meaning of a policy statement like "The professional growth of employees shall be encouraged." On the other hand, the following policy statement offers substantial guidance: "The superintendent shall give the staff opportunities to advance professionally by providing: (1) leaves of absence for travel and study, (2) time to visit other classrooms and other schools, (3) time to attend professional conferences which are held within the district, on a regional, county, state, or national level, (4) training in workshops offered within the district, and (5) time to obtain training in institutions of higher learning." This brief elaboration allows for discretionary action on the part of the superintendent and is specific enough to inform him that the board considers time for travel and study a proper method of helping teachers grow professionally.

On some issues, however, boards of education are required by state laws to adopt inflexible rules. Although these are not policies as defined above, it is necessary for the board policy handbook to contain them. Some feel that any handbook is incomplete without the specific state laws which apply to the various items in the handbook. Others maintain that the state law should not be included except in footnote references. The latter is considered much less confusing. In any case, a close relationship is essential to insure that policies do not conflict with statutes.

Policy making is a board function but rule making generally is not. Once a board develops policies allowing the chief school officer discretionary power, the administrator must execute them. This is accomplished in part by translating the policy statements into appropriate rules and regulations.

One of the best ways for the chief school officer to tell board members his operational plans is to present to them simultaneously the rules he plans to use in the execution of the policy he is proposing.

Policy Should Be Heeded

The board should reserve the right to see that its policy is properly interpreted. If it feels a rule adopted by the superintendent is straying, it may ask the superintendent to reaxamine the intent and write a new rule to execute it properly. The board may also rewrite its policy in order to clarify its intent.

Circumstances may force the superintendent to prepare an administrative regulation *before* there is a policy statement on the subject by the board of education to guide him. The board should be informed of this at the earliest opportunity; it may then wish to adopt a policy statement which covers the subject. The process should work in both directions.

The Manual notes that the book of policies should be physically separated from the book of rules. This can be done by placing the policies in one section of a book and administrative rules in another.

Those favoring separate handbooks, even for policy and administrative rules, point out that the people for whom they are intended find them less bulky and easier to file. The information is easier to get at since the individual is not forced to wade through reams of paper to find a pertinent statement applicable to him. The teacher in this case would have only the regulations which specifically concern him. The board policies and administrative rules should be in separate handbooks, available in the school office for all staff personnel at any time.

Others feel that at least the board policies and administrative rules should be in the same handbook. In this case, the policy statement probably should be followed on the same sheet by the applicable rule. This precludes use of two different books or the inconvenience of referring from one section to another.

Specialized Sections

A number of school districts have prepared an all-inclusive handbook of policies and regulations. Appropriate sections are made available to those whom the parts concern, such as teachers, students, maintenance department personnel, and others.

Many feel that a separate handbook should be made for the various departments within a school. These should be separate but closely related documents. Separate handbooks are suggested for board policy, administrators, teachers, students, food service department, health department, business management, buildings and grounds, adult education, transportation, and co-operative services.

Where policy is closely allied with the law, or in cases where a teacher's or administrator's handbook refers to a policy statement, it is a good plan to give such reference in the right hand margin, as in the following example:

> "No officer or employee of the board of education shall receive, directly or indirectly, any commission, royalty, etc."
> *Education Law*
> *Sec. 1617 and 3016*

The board's policy handbook should relate directly to other school handbooks. If it is the function of the board of education to formulate policy and of the school administration to execute policy, a central administrative book of regulations, procedures, and rules should be developed along with the policy book. The administrative book, as the name

(Concluded on page 46)

School Discipline by Plan

This first of two articles on school discipline deals with prudent aims an administrator would do well to follow

MILTON J. COHLER
Superintendent, District 14, Chicago, Ill., Schools

Discipline from the standpoint of the school principal is the subject of this discussion. It is based on a critical analysis of experience. It is not designed to serve as a substitute for the expert judgment cultivated in the process of the experience that a principal gets during the first few decades on the job.

The basis for good discipline is a well organized school offering a good educational program, accompanied by a clear understanding by faculty, pupils, and parents about basic school policies. This understanding is developed in part by the publication of codified regulations based on explicit principles developed in conference with the faculty. The major portion of effort in developing the understanding of school policies, however, is in the day-to-day activity related to management, disciplinary conferences, and relationships between principal, faculty, students, and parents. Consistency in the application of principles and regulations, active participation by the principal in discipline cases and the interpretation of regulations, and a continuous program of in-service training and supervision with respect to disciplinary procedures must be the chief means of developing appropriate understanding of policy.

Occasionally, a critical case serves to impress the school with a given policy. Before an example is given, let it be cautioned against the making of a decision in a given case solely for its value in propagating knowledge of a policy. The purpose in making a given decision should be to treat that case with a view to the solution of the problem presented. If the treatment is based on sound principles considerately applied, it will also serve to promulgate school policy. The following is an example.

On the second day of this writer's assignment to one high school, the class adviser brought in a boy for a certain disciplinary problem. She brought records of this boy's previous disciplinary interviews, which indicated that the predecessor had informed the boy and his parent that a repetition of the kind of thing indicated in that record would necessitate a referral to a special school for the socially maladjusted. The predecessor's judgment was amply supported by the record at hand. The parent was called in to what might be called a full dress conference, at which the record was read and discussed, including the principal's note on a probable referral. The boy and his mother were then told, "You must understand that the principal of this high school keeps his word. I see nothing in the record or the circumstances surrounding this latest in the series of misdemeanors to cause the principal to alter his judgment. We shall now complete a school problem report recommending transfer to a special school for the socially maladjusted." This impressed the faculty, the pupils, and the parents with the basic school policy that the principal of the high school was a continuous individual with certain definite policies, and the mere fact that there was a new occupant of the office would make no difference in the continuity of the policy.

Codified Policy

The more these policies and procedures can be put in a codified form, the easier it is to inform people and to convince them that they have been informed. But codification should be done in such terms that it does not restrict one to undesirable actions. Meticulous detail will do more harm than good. Generally, de-

tails should be left to individual discretion in a given case. Codification should give policy, standard procedures, and appropriate warnings, while still permitting full discretionary latitude on the part of the administrative personnel.

One must look critically at aims in discipline, because implicit in every action is a certain aim — a value premise in every method. For example, if children are marched in and out of the school building for ordinary entry and exit, there is set up the implicit aim of training them for adaptation to prison life, since no other life situation requires that method. Consequently, it must be made sure that methods serve the desired ends.

One of the aims of discipline is to protect the pupil in his right to free public education. If a situation is allowed to develop where parents fear to have their children go to a school because of attacks upon them in transit or at school, the kind of disciplinary control has not been exercised which guarantees the right to free public education. In carrying out such disciplinary control, authorities sometimes have to do things they do not like, but if a parent can rightfully say that in a school, or going to and from a school, his child is not safe, the basic aim of discipline has not been fulfilled.

A second aim of discipline is to protect the persons and property of everybody associated with the educational enterprise. An attack upon a teacher is an attack upon a state officer. The officials of the school should use every reasonable means to prevent the boy who made an unprovoked attack from ever entering the doors of that school again. It is not suggested that there are no educational opportunities for that boy; but there are no educational opportunities that should be provided within that particular building which has been the site of his transgression against the person of a state official in the exercise of his official duties. When an attack occurs, the attacker should be arrested and the board of education attorney notified. An administrator in the school should be assigned the job of following the case in court no matter how many continuances are allowed. In such an instance there is nothing that this administrator has to do that is more important than to give the attention necessary to provide the most effective prosecution that the court and the law will permit.

A third aim of discipline is to provide a classroom climate which will be conducive to carrying out an ongoing educational program. This requires proper school organization, classroom procedures, and disciplinary controls. Special educational facilities are organized for the physical, mental, and social deviates who impede program progress in the regular class. Assignments should be recommended for these special facilities when a careful study indicates the need.

These first three aims have dealt entirely with the educational process in an institution; they are not child-centered. They are placed first because the first thing that a school has to do is to be a school. When you have a school that is a school, you possess the framework for working with the child. Now his needs, including his need for social development, can be the center of interest.

Child Needs

A fourth aim of discipline is to develop orderly procedures which will provide children with the security that goes with knowing what is expected of them and what they can expect. Orderly procedures enable the child to work on his educational tasks. The development of them is a case in point of learning by doing — this is education itself.

A fifth aim is to develop the understanding that public social enterprise is important, to give each child a personal stake in the integrity of the social order by promoting a feeling of pride in being a member of this enterprise, by providing a physical facility and a congenial group around which to crystallize his loyalties.

In viewing the furtherance of disciplinary aims, one must examine the school regimen to see where the points of friction lie and devise appropriate educational methods for creating social order where social chaos threatens.

Such an examination will reveal the recess period as a part of the school regimen likely to be productive of disciplinary difficulties — a time of recreation potentially followed by court sessions presided over by teachers and principal. Out of such trials can come progress in group process, in social organization, in education for co-operation. The recess must be run with the largest possible measure of pupil participation in this organization and supervision. The amount of this pupil regulation should be the minimum practical at a given stage, and it should increase as the pupils grow in ability to exercise self-direction.

Education in self regulation is not self generating. It starts with organization. The principal may, for example, set up an organization in which the physical education teacher instructs classes in appropriate group games for the season; the home room teacher organizes a room games committee to spark the activity at recess; the faculty director of the recess period provides direct supervision and assistance with problems arising on the spot; and each home room teacher makes an occasional inspection to serve as a basis for improvements.

Movement of pupils is another process requiring careful planning. How does one move from one class to the other in a departmental school? How does one move out to recess, and back in? How does one arrange for children to come into the building when the weather is bad? When it is good? What can be done to reduce the amount of cross movement, or the amount of excessive movement? These questions must be answered by administrative organization and adequate supervision.

Inadequate security for personal property of pupils may be productive of discipline problems. Pupils become dissatisfied because their property is lost; and their property is not safe in certain instances because of poor security measures by the administration or staff. One essential security measure is the systematic instruction of pupils in the need for and means of protecting their possessions. The instruction of teachers in the creation of an adequate organization for security is no less essential. Finally, the school bulletins, faculty meeting proceedings, and supervisory action in this field must all bear witness to the fact that appropriate action has been taken by the administration and staff. To be sure, some of the teachers and pupils would find the bulletins and instruction superfluous, because of large individual differences in state of advancement in this as in any other area of learning; but experience dictates the need for subjecting everybody in the school to the program, if for no other reason than to establish the fact that the principal was not negligent as a school administrator.

Safe Property

Similarly, security measures for faculty and school property are essential not only for the sake of the property, but to minimize the probability of discipline problems arising from pilfering by pupils. Leaving property in such condition as to encourage theft is a form of miseducation which teachers cannot rightfully defend. School and room property should be managed in such fashion

AIMS OF DISCIPLINE:

1. protect the pupil in his right to free education
2. protect the person and property of all involved
3. provide a classroom climate conducive to an on-going educational program
4. develop orderly procedures to provide the children with the security that goes with knowing what to expect and what is expected of them
5. promote a feeling of pride in being a member of the vital social enterprise

that it will be secure and consequently will not be a constant temptation to the weak. For example, the distribution of educational supplies is firstly an administrative job with respect to the method of distribution. Second, it is a clerical job with respect to the order picking; and finally it is an errand boy job with respect to actual delivery. The principal cannot delegate his planning and supervision function to a clerk or pupils without leaving the road wide open for the pilfering of attractive supplies, with the consequent creation of discipline problems, to say nothing of the loss of school property.

The delegation of authority to pupils should be avoided, as a general principle, because immaturity is a characteristic of them, whether the action is respecting physical objects or status. Serious disciplinary difficulties arise, for example, if the relationship between pupils and monitors is not carefully defined. The monitorial function must be limited to that of assisting the faculty member in charge of a given school function. This assistance consists entirely in informing pupils of the directions authorized by the faculty member and informing the latter about the failure of a given procedure or a given pupil to perform in the desired manner.

The basic principle of discipline which requires that pupils be kept busy with significant and challenging work applies to the last few minutes of a school session, as well as to the rest of the day. Thus the time allowed for preparing for dismissal must be the minimum amount essential under a carefully organized procedure. The teacher who starts getting ready for dismissal long before it is essential is courting trouble. Aside from the fact that the pupils recognize that this is a soldiering device, active children are bound to fill the gap with activities of their own devising. The principal must provide help in the matter of dismissal by demonstrations of procedure to teachers who need it and by explicit school-wide policy concerning time provisions. Similarly, time and method provisions for entering the school and classroom and for movement of pupils to gymnasium, assemblies, and departmental stations should be worked out on a school-wide basis. There is an optimum time for a given kind of movement; allowing more or less creates tardiness and its attendant discipline problems.

When children enroll in school at too young an age, there is a greatly increased probability of their being unready. The frustration resulting from the lack of readiness creates disciplinary difficulties. The ensuing arguments with parents result in bad public relations, and the impression is created in the community that the school administration is lax. The solution lies in the handling of admissions and assignments to classes by the principal or a specially trained and authorized educational deputy, such as a teacher-counselor, a freed assistant principal, or an admissions counselor with no scheduled class time. The school clerk should limit her activities to the clerical aspects of the admission process. Admission decisions should be made personally by the principal in contested or special cases, such as the matters of proof of age and proof of domicile for school purposes, not only to protect the school and the applicant, but to hold down the number of problems landing in the district office.

Admissions, Promotions Policy

If a system of admissions checking permits the enrollment of pupils by fraudulent means, a total roll results that will be highly prone to creating disciplinary problems; but when the liars are caught and referred to their correct school, the quality level of the pupils in the first school is raised from the standpoint of discipline and attendance problems.

The promotions policy in the school has an important effect upon school discipline. If each teacher is permitted to go her own way without active control by a school policy, pupil failures will be partly the result of the luck a pupil has in being assigned to a high or low failure-rate teacher. Thus the over-age nucleus will increase, and sources of infection in discipline problems will permeate the school organization. The solution lies in the principal's development of explicit policy on promotions and failures and his supervision of the operation of that policy with the aid of all the information available from the teacher and counseling staff, as well as from the extensive and definitive studies reported in the research literature in this field.

Setting up non-functional behavior requirements is a fruitful source of disciplinary difficulties. The very fact of the creation of an institution creates behavior deviates. Some of the deviations are undesirable. Thus, along with the advantages which accrue to society as a result of the creation of the school, we must accept the disadvantages of deviationism with respect to the norms of the school. The making of nonfunctional demands creates deviate behavior

which has no reason for being. Each kind of activity requires a certain kind of order to proceed by. As soon as the minimum amount of order for starting is achieved, the activity should start. The intrinsic interest in the activity will, in most cases, soon result in the optimum kind of order. Any individual deviates can then be taken care of individually, rather than struggling to get perfect compliance from everybody simultaneously. This struggle can proceed to a logical absurdity where the activity for which pupils were asked to be quiet never even begins.

The principal's main role in this matter is to serve as philosophic leader in viewing every requirement with the eye of the skeptic who says, "What's it for?" In a few cases he may have to give a demonstration of how to achieve appropriate control for specific functions. The optimum amount of restraint is a function not only of purpose, but of the skill of the teacher. As a teacher becomes more skillful she can permit more freedom. The beginning teacher may even have to avoid the use of very desirable teaching techniques, such as small group conferences, team projects, and some kinds of free expression, until she acquires the skill to keep it under proper control.

Of all the factors which effect the incidence of general disciplinary difficulties, nothing is more important than efficient classroom management — and the teaching of the "how to" in this connection appears to be left largely to the school in which the teacher is employed or has her student teaching experience. How does one get children to enter in order, remove their wraps promptly, take their seats quietly, and start on their work? How do children get books, sharpen pencils, secure work materials? How are suitable working conditions managed for pupils, proper physical conditions for pupils and teachers? What is the role of the principal in providing appropriate supplies and physical conditions? How does a teacher prevent damage to the premises? All these "how to" questions must be answered as a matter of course by the principal in an organized, anticipatory fashion through established procedures, teachers' operational manual, group meetings of the staff, and individual conferences with teachers. ■

(This is the first of a two part article on discipline. The paper was originally presented to an assembly of 25 school principals in the author's supervisory district. Part II, entitled "Methods of Discipline," will follow in next month's School Board Journal.)

Longview's Functional Citizens Committee

R. E. SLAYTON

Superintendent, Longview, Tex., Public Schools

On November 10, 1959, during the regular monthly meeting of the Longview school board, a citizens' advisory committee for the public schools in Longview, Tex., became a reality. For some two years prior to this time, discussion had been carried on and plans were laid for such a committee.

It was the feeling of the board and the administrative staff that a mutual desire between the community and the school people should exist prior to the actual organization of such a committee. This accomplishment was realized last April when seven candidates filed for two vacancies to be filled on the board of school trustees and each of the candidates included in his platform a promise to support the organization of a citizens' advisory committee.

The actual mechanics for making such a committee a reality started when the chairman of the school board appointed a special committee composed of three members of the board of school trustees to work out details for the organization of a citizens' committee and to bring their recommendations to the board for final approval.

After several meetings of the special committee with the superintendent of schools, it was decided that the citizens' committee should be composed of 36 members elected by the board from a list of nominees appointed by the various civic clubs, service organizations, and school organizations in the community. Each club and/or organization would be asked to submit the names of two nominees; they did not necessarily have to be members of the club or organization, but could not be school employees.

The skeleton plan of organization was approved by the board, and letters, mailed to some 50 different clubs and organizations in Longview, fully explained the purposes of such a committee and asked that two nominations be sent in. Sixty-four names were submitted, from which the board chose 36; each board member had the privilege of selecting five names from the list of nominees and one at large.

Constitution Proposed

Prior to the organizational meeting of the citizens' committee, a proposed constitution was prepared by the same special committee of the board, approved by the board, and mailed to each member of the committee. This gave each individual time to study the provisions of the suggested constitution prior to the first general meeting of the members.

The proposed constitution, unanimously approved by the newly appointed membership of the citizens' committee, outlined clearly the purposes and objectives of the committee. The primary functions are:

1. To serve in an advisory capacity to the local school board and the community.

2. To sponsor and conduct public forums regarding educational issues affecting the local community.

3. To conduct thorough and impartial studies regarding the public schools.

The proposed constitution further stated in its purposes that the studies, findings, and recommendations of the citizens' advisory committee for the public schools shall be based on facts as they can be obtained by research and investigation, and not on opinions, ideas, guesses, or emotions. The constitution stipulated that all recommendations must be channeled through the board of school trustees for final approval, rejection, or other action, and all final decisions would rest with the local school board.

The membership of the citizens' advisory committee was equally divided between men and women, and half the members are replaced each year; the term of office runs from September 1 to August 31 of the respective years. Each member serves for a term of two years and no member is eligible for a second term. The reason for this is to utilize wide representation from the local community by allowing more people to serve on the committee.

Subcommittees Appointed

Six subcommittees were appointed by the chairman in the following areas: building and planning, teacher welfare, finance, curriculum, public relations, and public forum.

It is expected that the citizens' advisory committee for the public schools in Longview will be a permanent organization, and it is the belief of the board and administration that through such a representative committee a better job can be done in discharging the educational needs of the community. ■

The Redondo Language Lab

ROBERT L. BRIGHAM
Director, Community Relations
South Bay Union High School District
Redondo Beach, Calif.

If you were told that you could increase teaching efficiency thirtyfold in your foreign language department at a cost of $15,000, would you be interested?

This is the opportunity that awaits the school that is willing to install a language laboratory. This is the opportunity California's South Bay Union High School District seized when it so equipped its Redondo Union High School. The move has been so worthwhile that the district plans to make similar installations at its other two schools, Mira Costa and Aviation high schools.

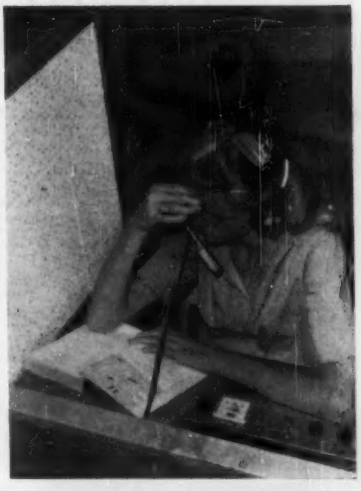
Essentially, the lab consists of enough cubicles to accommodate a normal-sized class, a master control panel from which the teacher can talk and listen to the students in the electronically equipped cubicles, and a recording booth where the instructor can produce the master tapes that are the basis for most lessons.

The standard lesson consists of the students repeating the words and phrases that come through their earphones from the control panel. All the time the student is reciting, the sound of his voice and that of the instructors on the prerecorded lesson is being taped for playback by the student. When he is through reciting he can compare his pronunciation with that of the instructor.

The significance is obvious. Recitation opportunities, formerly few and far between, are now frequent and regular. Also the student can hear his own voice — an aid to proper speech under any circumstances, but especially when one is attempting to master a foreign tongue.

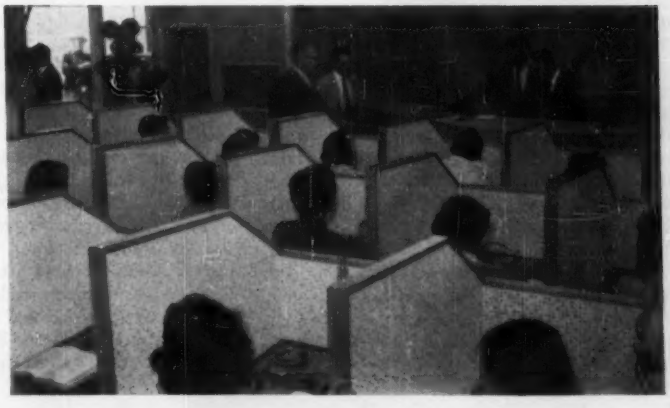
The Federal Government has seen the merit of the language laboratory in more ways than one. First of all, it pioneered this type of instruction in the armed service and diplomatic corps training programs where it was successful almost from the start. Second, it now makes funds available on a matching basis through the National Defense Education Act for the installation of language labs.

Few persons question the importance of foreign language instruction to conversational competence, in an age when one can go halfway around the world between meals. No one who has observed a language lab in action doubts the salutary effect it can have on learning. ■



Above: dept. head runs class. Right: girl checks book, listens to tape, says word, ten minutes later hears play-back.

Below: TV commentator films lab activites.



Medill Bair High School

A "middle" school for grades 9 and 10 under the Pennsbury system's 2-2-2 organization designed to enable the staff to concentrate on a narrower range of adolescent students . . .

CHARLES S. MUSCHELL
Regional Superintendent, The Pennsbury Schools
Fallsington, Pa.

Since their inception as a jointure eleven years ago, the Pennsbury Schools have attempted to pattern their organization so as to yield the most effective educational program commensurate with sound economy. Under the vigorous leadership of Medill Bair, the regional superintendent (till 1959), and Richard Currier, assistant regional superintendent in charge of secondary education, careful studies were conducted that eventually resulted in the present plan of organization. Although unique, it has been proving its worth over the years.

The distinguishing features of the Pennsbury plan are: (1) a 2-2-2 arrangement, calling for a lower school (grades 7 and 8), a middle school (grades 9 and 10), and an upper school (grades 11 and 12), and (2) joint use of sites and facilities wherever feasible.

At present there are four secondary school buildings. The fourth one, discussed here, was just recently completed and was named in fitting tribute after Superintendent Bair. These buildings are located on two sixty-five acre tracts, with two buildings on each plot.

The Medill Bair High School accommodates ninth and tenth grade students and close by, connected by enclosed corridors, is the William Penn Junior High School, housing seventh and eighth grade students.

Population Growth a Factor

A slightly different situation prevails elsewhere in the district, where the Charles H. Boehm High School, built in 1957 on a 65-acre tract, houses seventh and eighth grade students in one wing and ninth and tenth grade students in the other. Adjacent to this building is the Pennsbury Senior High School, which provides accommodations for all eleventh and twelfth grade students in the entire district. The plans as envisaged under the study conducted at that time ultimately called for independent facilities for the seventh and eighth grade students when growth in

this area was such as to warrant this arrangement.

By placing the two secondary schools close by on a single site, as in the case of Medill Bair High and William Penn Junior High, it was felt that it would be less expensive to use one set of bus routes transporting the children to two secondary schools, rather than two sets of routes for two scattered secondary schools. This arrangement also made it possible for joint use of an auditorium already existing in the William Penn School. In addition, the gymnasium could be built of a smaller size, because the present William Penn gym was satisfactory for spectator purposes. Both schools, also, could use the existing parking area.

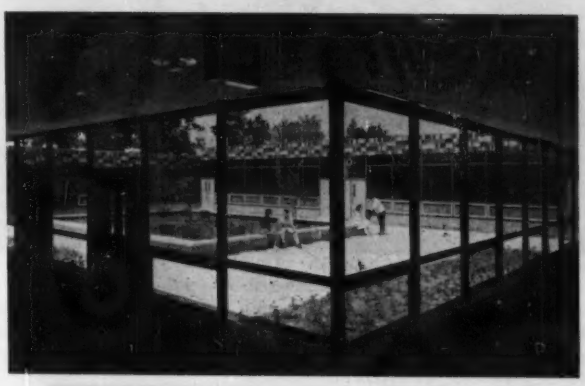
The growth pattern in this section dictated that some caution be exercised to avoid over-building. In the words of Superintendent Bair, "Construction of two separate buildings in two areas requires facilities for the maximum number of youngsters who will attend either school; building two schools on one site will save a substantial amount in the number of classrooms required. because as the seventh and eighth grade classes become overloaded, with an underloaded ninth and tenth grade, transfers could be made from one building to another. On two sites this would not be possible."

To secure a site with a minimum of 20 acres and a desirable acreage of approximately 30 would have required the condemnation and tearing down of many homes in an area that is entirely built up. The land adjacent to Penn Junior High was available at a reasonable cost. Development of the site for outdoor physical education and athletic purposes would make it possible for these facilities to serve two schools — again eliminating expensive duplication. As far as it can be determined at the present time. the center of secondary population in the area is just about where the new Medill Bair High School was built. Studies show that five years hence it should be within one quarter of a mile from that spot; therefore, from the standpoint of location, economy, and function, it was advisable to build the Medill Bair High School adjacent to William Penn.

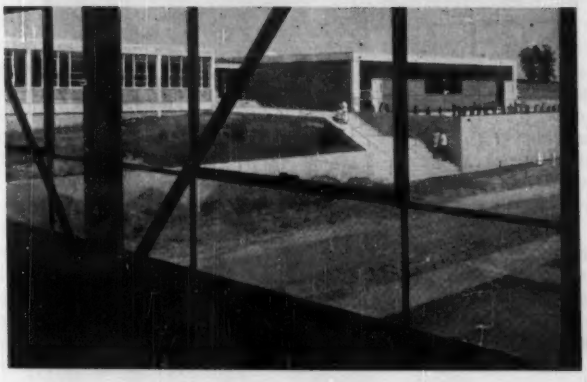
The "Tri-Pair" Plan

The modified 2-2-2 plan of secondary organization offers certain definite advantages in this environment which are worthy of comment. Since 1950, students and staff have been organized into grade level groups which are designed to continue the advantages of a small school even when larger numbers of students are housed in a building (each secondary school building has a capacity of 1000 students). Narrowing the age

Medill Bair students enjoy the free fresh wind in their hair and life (almost) without care, at work on the art patio (above) or at ease (below).



Above: a view of the Medill Bair interior court from inside the building. Below: perspective from the enclosed corridor linking Penn and Medill Bair.

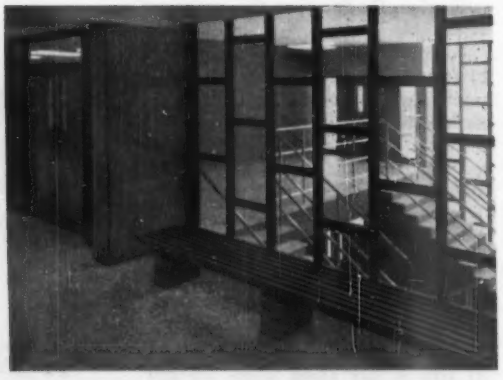


Above: the cafeteria.

The homemaking room.

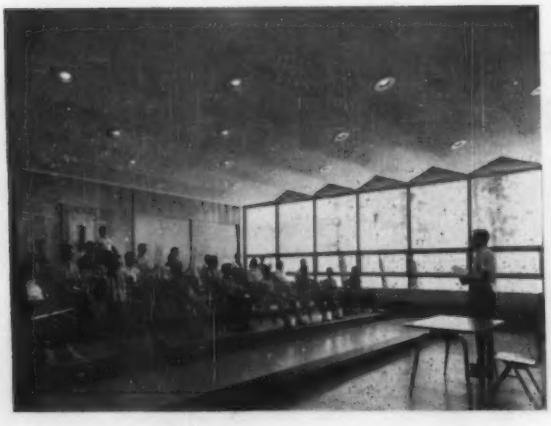
Left: the entrance lobby, which shows a simple but effective design.

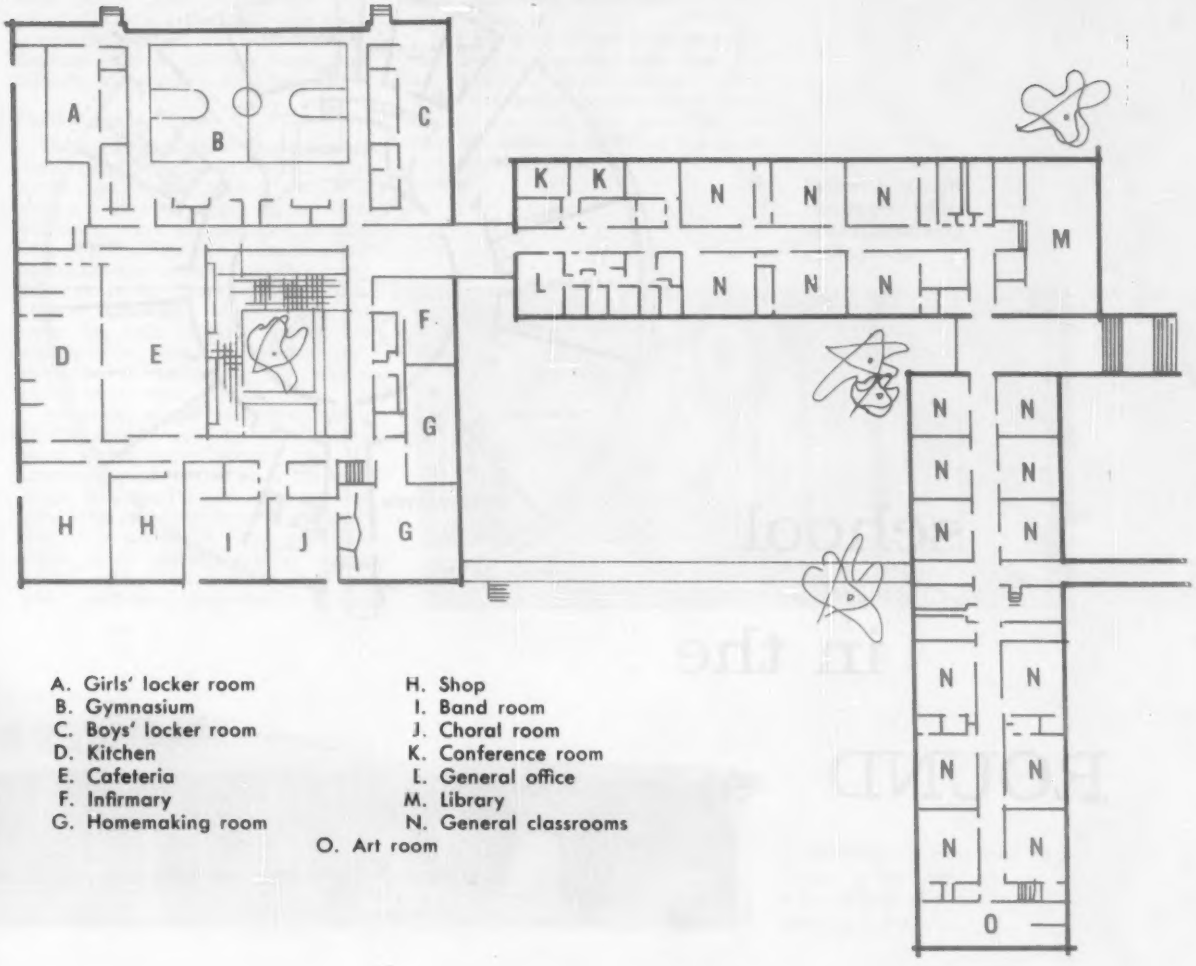
Below: a glass-bounded stairway.



Bottom left: the band room.

Bottom right: the gymnasium.





A. Girls' locker room
B. Gymnasium
C. Boys' locker room
D. Kitchen
E. Cafeteria
F. Infirmary
G. Homemaking room
H. Shop
I. Band room
J. Choral room
K. Conference room
L. General office
M. Library
N. General classrooms
O. Art room

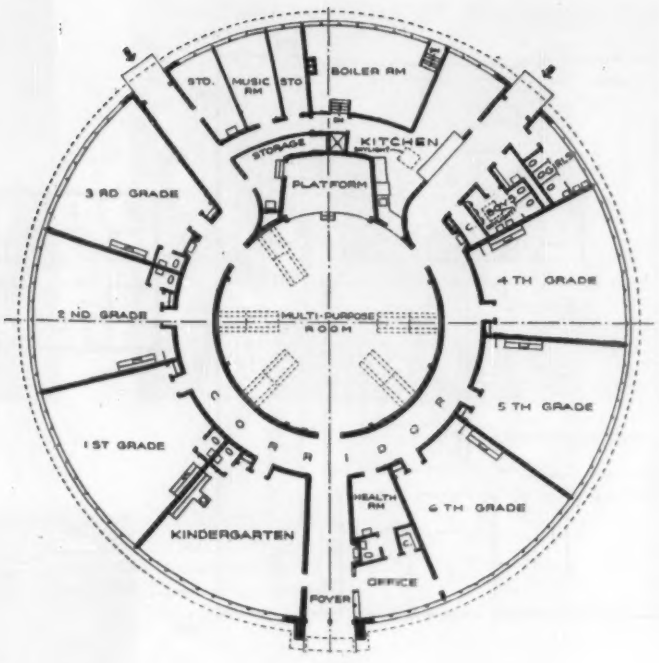
range and hence the interest range within a school has resulted in a homogeneity which has been very helpful. Problems of pupil contact have decreased, as the staff has been able to concentrate their studies and efforts on a narrower range of adolescence. It has also been found that the grouping of two grades in a building has increased the opportunities for students to assume leadership in various activities. Through multiple sections on a level the opportunity to group students in varying patterns has been increased, which has helped instruction and planning for all students on all levels of ability.

One of the great strengths of this secondary school organization has resulted from the grouping of several class sections of students into a grade level group and assigning those who teach the same students to small semi-independent but closely co-ordinated and supervised faculty teams. Under this pattern, teams of teachers responsible for the total program of students meet frequently during the week and co-operatively plan their teaching for the most effective learning of the particular students they teach.

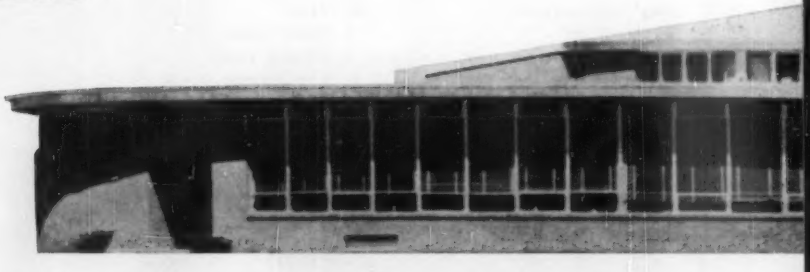
We have often felt that there are wide divergencies between the interests of seventh and ninth grade students and between tenth and twelfth grade students. These differences, of course, affect both the scholastic program and the activities program. For example, the scholastic program in the span of six years, from grade 7 to grade 12, is characterized by increasing specialization. General science becomes physics and chemistry; informal talks give way to more formal addresses prepared and delivered in rather prescribed ways; higher mathematics, advanced language and social studies demand more mastery of knowledge and, in addition, understanding and interpretation in depth.

The seventh and eighth grades include that part of the secondary school program which is most general and provides the widest latitude for students to explore fields of knowledge and to participate in activities for living; the eleventh and twelfth grades include that part which is most specialized in program and activities serving adolescents who are almost adults. In the middle two grades we attempt to provide a program of studies and activities combining some general experiences and an increasing amount of specialization for students who are at the most difficult stage of adolescence: children today, adults tomorrow and children the day after that.

Within the limits of buildings and population distribution, it seems desirable to continue the benefits for students which have thus far resulted from the present patterns. ■



school in the ROUND



ALBERT F. ORTHAUS

President of the Hereford Township and Upper Perkiomen Joint School Boards System, Berks County, Pa.

At the time of construction believed to be the first of its kind, the Hereford Township Elementary School at Chapel, Berks County, Pa., has attracted increasing national and international attention ever since its formal dedication in March of 1958. In 1959 it was selected by the U. S. Office of Education for exhibition at a world wide conference in Geneva, Switzerland, where it won plaudits for its designers, the Allentown architectural firm of Wolf & Hahn.

The round school's recognition in foreign lands, however, is not the true measure of its success. According to the architects, economy, simplicity and livability are the keynote at Hereford. For example. the unusually low cost per foot and per pupil that this round design made possible saved the community $100,000. A bond issue was contemplated in anticipation of much higher costs, yet final contract costs were only $240,378, or $1,143 per pupil and $16.64 per square foot.

By reason of the circular design, one third of the conventional corridor space was reduced and 15 per cent less building materials were needed. Normally, a smaller type elementary school involves relatively higher construction costs, yet this school, with 14,488 square feet and 210 pupils, offers complete facilities and unit costs that are well below established norms. The facilities, as indicated on the floor plan, are unusually complete for an elementary school.

The school board was fortunate in employing the services of an architectural firm that did not hesitate to employ economical new design ideas and materials. Constructed of curved concrete block, the school contains seven classrooms from kindergarten through sixth grade. A circular corridor separates the outer group of pie-shaped classrooms from the school's inner core, which serves as an all-purpose auditorium, gymnasium and lunchroom.

Because of the unusual shape, each classroom contains 12 per cent more glass area which, in addition to providing a beautiful panoramic view, gives more natural light and reduces heating costs as well. The underside of the exposed steel joists are finished with inexpensive cornhusk fiber with sound absorption qualities. Other innovations include new sprayed-on cement enamel for hallway wainscoting in exposed areas, which eliminated the need for expensive tiles. The aluminum trim used around windows and doors has greatly

reduced upkeep costs. Special classroom desks permit adjustment to the individual student's height, and each room is equipped with its own work counters, drinking fountain, clothing racks, wall cabinets, and stainless steel sink.

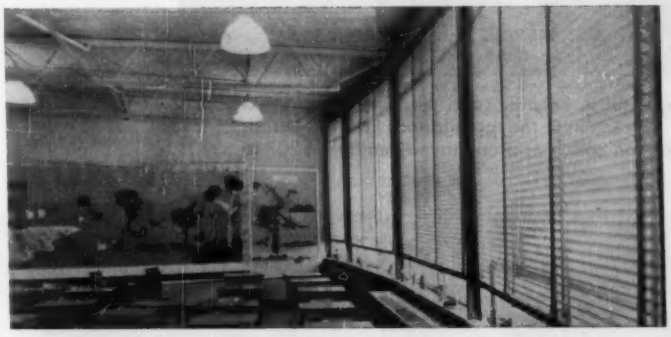
Multi-Purpose "Core"

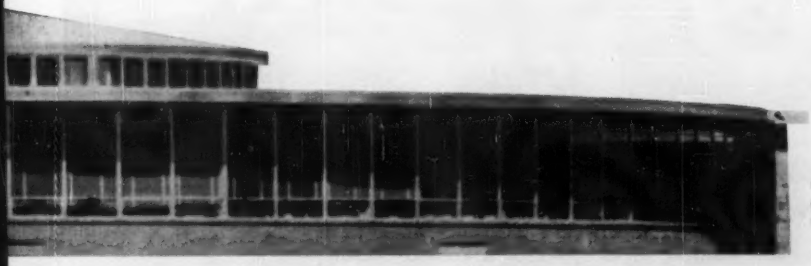
The centrally located multi-purpose room is equally convenient to all classrooms and to the kitchen, which is equipped to serve from the corridor. Returning trays are accepted directly from the multi-purpose room, avoiding congestion and crossing lines that might prove confusing to small children. Convenient tables and benches fold out from the walls quickly, turning the multi-purpose room into a sunny cafeteria or an auditorium for several classes at one time.

A spacious stage graces one quadrant of this round "core" room. Attractive wood arches sweep upward past the clerestory windows that make the room bright and cheerful even on a dull day. Also fitted comfortably within this 133 foot circle are health room, principal's office, three spacious storage rooms, boiler and equipment room, boys' and girls' washrooms, individual lavatories for kindergarten, first, second and third grade classrooms, ample closets, and a music room.

The Hereford School is ample proof that there is something new under the sun when it comes to elementary school design and that progressive school board officials are constantly searching for ways and means of providing new lower cost school facilities for their communities. ■

Below: a typical classroom, with sound-absorbing ceiling.





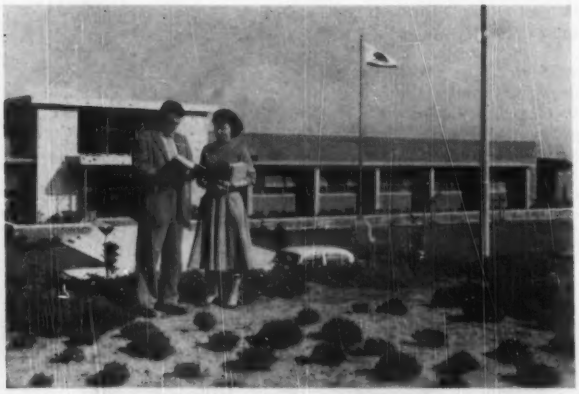
Architect for the Hereford, Pa., Circular School was Wolf & Hahn of Allentown, Pa.

Windows, Valley Metal Products Co.
Doors, Amarlite Aluminum
Classroom and auditrium floors, Kentile
Skylights, Owens-Illinois
Unit ventilators, John J. Nesbitt
Temperaure Control, Johnson Service
Convectors, Trane
Program clocks, Standard Electric Time
Fire alarm systems, same
Panel boards and electrical control, Square D.
Cabinets and wardrobes, Educator
Toilets, urinals, wash bowls, Standard
Office furniture, American Seating Co.
Pupils' desks, same
Food mixing equipment, Toledo
Blackboards, Natural Slate Blackboard Co.

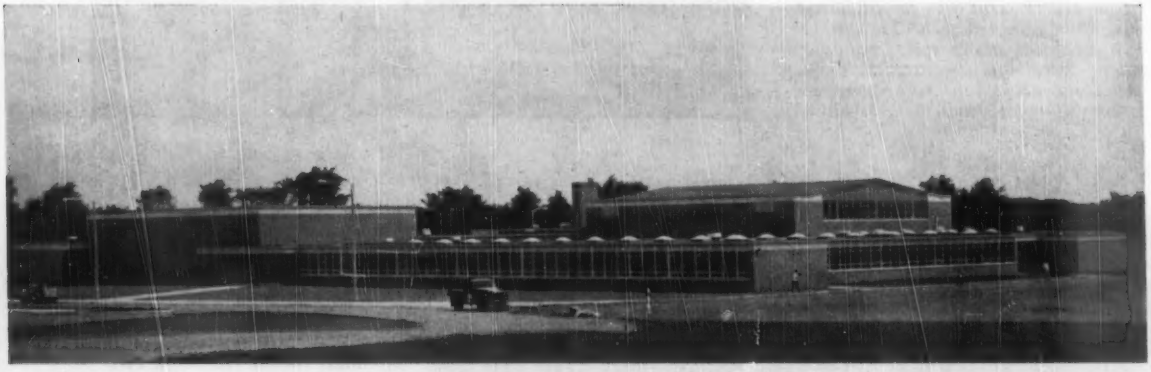
Specially pre-fabricated wooden beams frame the multi-purpose room. Cafeteria tables and benches fold into the wall.

Notable New Schoolhouses

school building
scrapbook

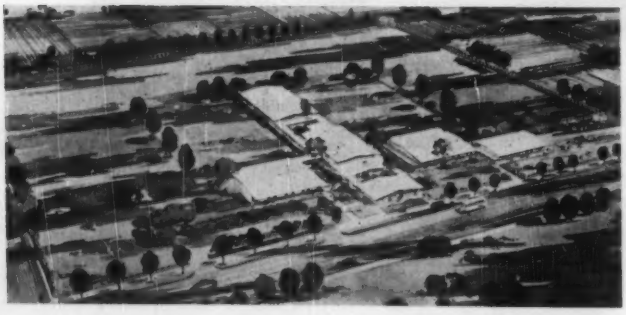


Torrance, Calif., schools are battling an "inflationary spiral." Since 1948 the population has increased 864% and education costs per pupil have risen from $207 to $373.



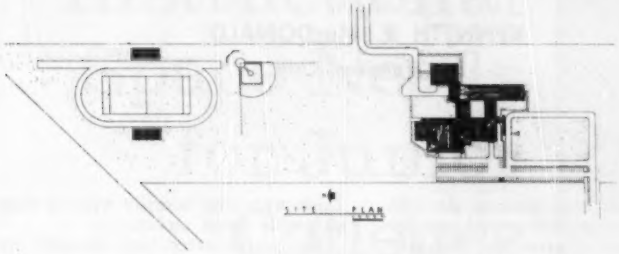
The $1,400,000 Mason, Mich., Senior High School was opened for classes this fall. With a capacity for 600 students, the steel and concrete block structure includes gymnasium, auditorium, and many special education rooms. Architect was Manson, Jackson, Wilson & Kane of Mason.

Right: portable classroom by Panelfab Products, Inc., North Miami, Fla. Of lightweight aluminum honeycomb panels, this type of structure can be built in two days. It can be moved as a unit when mounted on wood or steel or dismantled when mounted on concrete.



Opened this September, the 20-classroom, $.5 million-plus Leonora Fillmore Elementary School in Lompoc, Calif., has a cafetorium and administration building, which includes a library. The design, by Pierre Claeyssens, AIA, permits easy access from classroom buildings to play and dining areas.

Completion date for the new Maumee, Ohio. Senior High School (right) is set for Aug. 1, 1961. Designed for 1500 students, the school will house 750 students originally and cover 95,000 square feet. The cost of $14.50 per square foot includes site development (plan at left), cafeteria-kitchen and science equipment, home economics and fine arts departments, construction of the football field and lighting, and concrete stands. Movable metal partitions separate all classrooms. Architect is Buehrer and Stough of Toledo, Ohio.



NEW YORK, NEW YORK, that wonderful town, is fast putting up schools in response to student population growth and the wear of time. Sharp contrast in the latter vein is manifest in the attractive P.S.46 in Brooklyn (above), which accommodates 1212 pupils. Architect was Katz, Waisman, Blumenkranz, Stein & Weber. And in Manhattan, the $5.6 million High School of Art & Design (right) presents a worthy front in a downtown area. The 2000-student structure was designed by Kahn & Jacobs and William Lescaze.

Mt. Diablo's Flexible Administration Building

KENNETH R. MacDONALD
San Francisco, Calif.

Exposed columns help reduce glare and cool interior.

Flexibility providing for ease of future expansion has become a major design factor in new school construction throughout the United States, in keeping up with the increasing demands of the growing school population.

This flexibility is admirably illustrated in the new Administration Building for the Mt. Diablo Unified School District at Concord, Calif., designed by a team of architects consisting of Anderson & Simonds, Confer & Willis, Reynolds & Chamberlain and John Lyon Reid, Associated Architects. The new structure has a central core of administrative offices. Three wings, extending like fingers, contain service sections such as the purchasing, accounting, personal guidance and instruction departments.

Provision has been made at the ends of the finger wings and central core for simple addition of extra space as may be required by expansion of the school district. Rigid steel frames may be set up at 20 foot intervals for an additional 40 feet on each wing. The use of steel curtain walls further simplifies the extension process. Movable partitions and an underfloor grid system of telephone and electrical outlets were used to facilitate rearrangement. Clear spans of steel 40 feet long eliminated the need for interior support columns which would have detracted considerably from the versatility of the building.

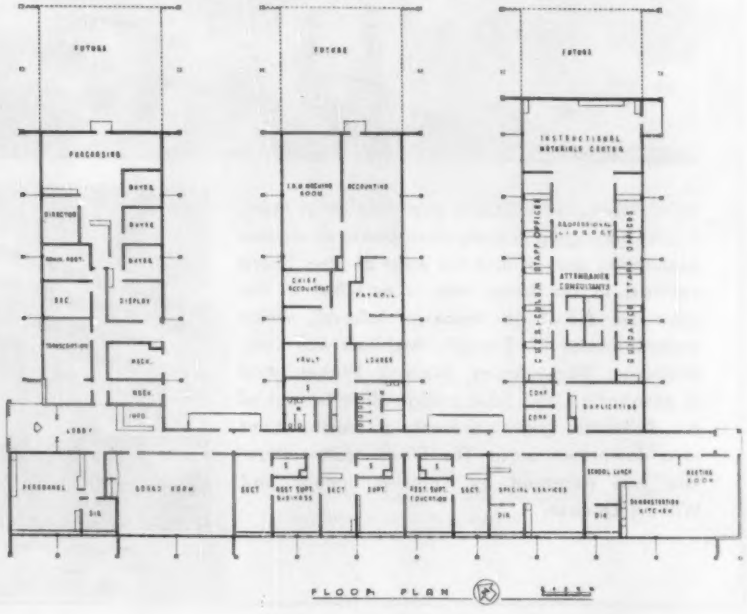
Eighteen inch wide flange beams of steel were erected over H-shaped, prefabricated column bents composed of six and eight inch wide flange sections. These were tied laterally with an eight inch wide flange section.

The prefabricated bent provides lateral stability for the clear span while supporting a six and one-half foot overhang which shades the windows from the sun. This helps keep the building cool and cuts down on air conditioning costs.

The expenses of enclosure and fireproofing were eliminated by leaving the exterior structural steel exposed. California redwood in a vertical board and batt application provides a contrasting architectural effect at the entrance to the school.

Containing 20,474 square feet of floor area, the single story school was built at a cost of only $15.16 per square foot. ■

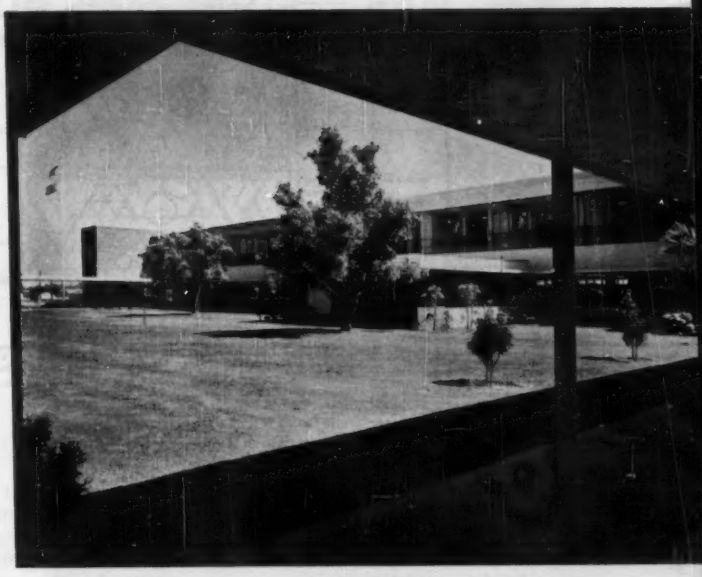
Left: exposed steel framework provides lateral stability which permits a column free interior for maximum useable space.



FLOOR PLAN

Determining Instructional Space Needs for Junior Colleges

DOW PATTERSON
Bureau of School Planning
California Department of Education



El Camino, Calif., College Administration Building. Architect was Smith, Powell & Morgridge, Los Angeles.

From its inception shortly after the turn of the century, the public junior college movement in the United States has become increasingly popular. Growth has been so rapid that adequate physical plants could not be provided to meet enrollment needs.

The result has been that many junior colleges have shared existing high school plants which, in some instances, were antiquated and quite often already overcrowded. Following World War II, the popularity of the junior college program with veterans increased enrollments to the extent that it became necessary to provide additional instructional spaces in a hurry. Consequently, many improvisations had to be made to supply much-needed teaching stations. On numerous occasions temporary quarters were established in vacated wartime service hospitals, portions of discontinued military installations, and erstwhile war production plants. In some instances even abandoned elementary and high school plants which had been removed from use vacated because of educational and structural inadequacies and questionable fire and panic safety were pressed into use by junior colleges to meet increased demands. As the influx of veterans subsided most of these inadequate facilities were removed from use, but in some cases normal growth problems have been such that complete abandonment has not been possible.

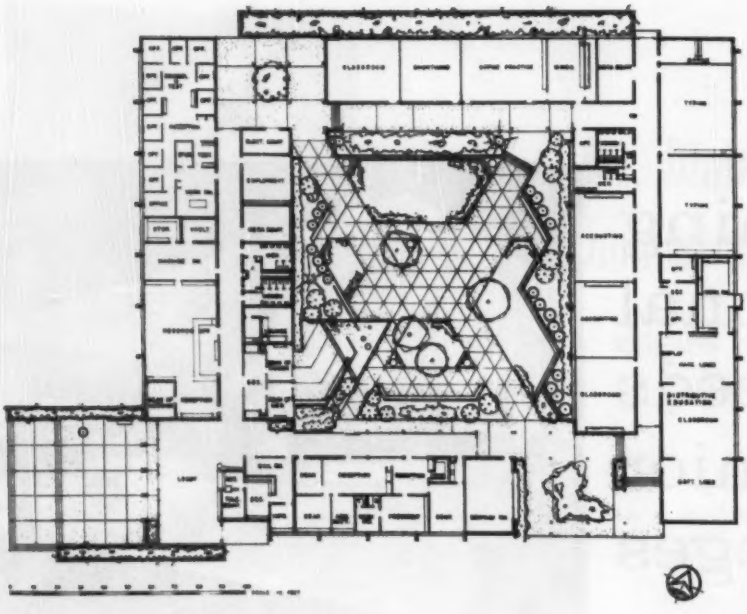
The normal growth of the late forties and early fifties is now beginning to become accelerated by the wartime and post-war "high birthrate groups." The first of this student population "tidal wave" engulfed the campuses of America's junior colleges, colleges and universities in September of 1959. All statistical information indicates that continually increasing growth patterns will not begin to level off before 1970 or, perhaps, 1975. It also appears that, in supplying its fair share of much-needed instructional space, the public junior college movement in the United States will likely treble its attendance centers and quadruple its enrollment figures during the ensuing fifteen year period.

Surveying the Problem: The "breathing spell," if there has been one between the World War II veterans' surge and the impact now felt from the vanguard of the high birthrate group, is over. Boards and administrators are no longer permitted time to leisurely survey the problem and make preparation to meet requirements for increased facilities on existing campuses, or to acquire new sites and develop new institutions. The need is on them to prepare teaching spaces for ever-increasing enrollments anticipated from a continuing high birthrate; from shifts in population to areas offering junior college service; and from popularization of the program coupled with a dearth of facilities to accommodate the freshman and sophomore years at our four-year colleges and universities. A careful analysis of these factors, together with a look at elementary and high school enrollments in any given area, should give an indication of the immediate and future junior college enrollment potential.

Plant Needs

Once this potential has been determined, it forms the basis upon which plant needs are to be established. There are a number of factors to be taken into consideration in predicting space needs. Among these are:

1. Square footage necessary per student station to carry on the instructional program.
2. The size of classes in various instructional fields.
3. The number of credit hours per semester considered as a full-time student load.
4. The percentage of total credits earned by all students that are



earned in each individual subject field.

5. The percentage of full-time use of teaching stations to be considered as saturation use.
6. The method of determining the number of teaching stations for subject needs.
7. Estimated teaching station needs for specified enrollments.

The Student Station Area: As is true in any educational planning situation, basic to the solution of the junior college housing problem is the size of the student station. Before any scientific approach can be made toward estimating total plant needs, the amount of space necessary for each student in carrying on the instructional program in each subject field should be established. This area should be based on the amount of space necessary for a student to perform all of the operations or activities required for his instruction in the subject. It should be arrived at only after a thorough appraisal of needs is made through the co-operative efforts of administrative, supervisory, and instructional staffs, together with any assistance that might be enlisted from county superintendents of schools, curriculum consultants, the Division of Instruction, state Department of Education, and college and university faculty representatives who are considered specialists in the particular field. In new institutions where instructional staffs have not been selected, the problem would necessarily have to be resolved without them.

The Class Size: Closely allied to this area in its relationship to the over-all plant problem is that of the classroom (teaching station), which would be predicated on the district's policy relative to class size. Such a unit would include space requirements for prescribed student classroom activities plus what is necessary for the teacher to perform normal instructional functions, together with enough aisle space for convenient moving about. To simplify the process of determining space needs, the teacher area and the circulation area, are prorated among the several student stations considered as room capacity. Thus the primary unit for calculating plant needs would be the student station and the secondary, the teaching station. The latter area would therefore be arrived at by multiplying the established student station area by the class size in accordance with established administrative policy which would govern both maximum and minimum class sizes.

The Type of Teaching Stations Needed: Under existing practices in the junior college field a great deal of the instruction is carried on in the so-called lecture type or "interchangeable" classroom which is usually equipped with a teacher's desk and chair, tablet arm chairs for students, and, in some instances, minimum cabinets, work counters and sinks. This type of teaching station is used primarily for English, history, mathematics, language, economics, sociology, and, in fact, almost all subject fields except science, homemaking, mechanical drawing, commerce, music, arts and crafts, and shops. Since it is considered standard practice to employ this general type of unit, maximum usage can be attained by making it adaptable for a number of subject fields. The problem here would be to make a thorough analysis of programing needs and design classrooms of varying sizes so that small, medium, and large class groups could be accommodated without undue waste of space. In the case of the special subject fields mentioned above, specialized facilities to meet specific instructional requirements would create individual planning problems. In both instances, however, the first basic question that must be answered is — "What kind of and how many?"

Flexibility of the Teaching Station: In line with effective educational practice, which would require classrooms of varying sizes and types, the junior college plant should be designed to accommodate the presently accepted instructional program and should possess enough flexibility to provide space adjustments which can be made to meet the needs of constantly changing educational practices. Flexibility of buildings in such cases would include a structural system designed to withstand wind loads and earthquake shock without any support from partition walls. These walls should also be free from heating, electrical, and plumbing installations so that they could be removed or relocated if it became desirable to change classroom shapes and sizes. Fenestration should be continuous on both sides of the building so that changing the partitions would not affect the natural ventilation and daylighting pattern of the building. Thus, classroom size could be adjusted to instructional needs of various subject fields without creating a major construction problem.

Teaching Station Needs for Subject Fields: As soon as teaching station needs are established for each individual subject field, plant needs for the entire program may be calculated. These needs fall generally into two categories. The first would be a situation where anticipated growth requires expansion of facilities. The second would be the case of a newly organized junior college where a program has to be developed and a new plant must be designed to house it.

In both types of situations the formula approach for determining building needs is recommended. This technique is not new in educational research circles. As early as 1924, Paul C. Packer developed a formula for computing the number of classrooms needed for high schools. In 1938, the formula approach was used by E. S. Evenden, G. S. Strayer, and N. L. Engehardt to determine college classroom needs. Charles W. Bursch and Ruel Taylor developed a formula in 1948 to determine room needs for state colleges in California. In each case the formula method of determining teaching station needs has been uniformly successful. Fundamentally, in order to be effective, the for-

mula should be based on the amount of time a student is required to spend in a classroom or laboratory to earn an hour of credit. If the formula is based on this concept, it can, with slight variations, be designed for estimating expansion needs or for determining station requirements on a new campus.

Expanding an Existing Campus: For expansion, housing a satisfactory program is a relatively simple process. It requires direct mathematical computation interpreted and tempered by administrative judgment. The recommended formula is the total number of students registered in a subject field divided by the average class size, which gives the number of class sections. This figure multiplied by the normal credit earnings of each student (usually two or three units a semester) and by the number of class hours required to earn one hour of credit will give the room hours necessary for the subject hours scheduled. This product divided by the number of hours per week available would give the necessary number of rooms for the subject field. This result multiplied by the anticipated growth factor would indicate needed expansion. The following formula is applicable to this type of situation:

Photos: top, the little Theater at El Camino, Calif., College, designed by Smith, Powell & Morgridge, American Institute of Architects. Bottom, the library at Ventura, Calif., College. Architect was Balch and Zimmerman of Los Angeles.

FORMULA I

$$\frac{\text{Number of Students Registered in Subject Field}}{\text{Average Class Size}} \times \frac{\text{Normal Credit Earnings of Each Student}}{1} \times \frac{\text{Number of Class Hours Per Week Required to Earn One Hour of Credit}}{\text{Number of Hours in School Week} \times \text{Saturation Percentage}} \times \frac{\text{Growth Factor}}{1} = \text{Number of Classrooms Needed for Subject Field}$$

For illustration of Formula I, let it be supposed that in an expanding enrollment the number of rooms needed in English is to be estimated. There will be a registration in English of 1500 students in a large junior college; an average class size policy of 30 students; one class hour per week for one hour of credit; 3 credits normally earned by each student; 28 hours per week that rooms are available for scheduling; and an anticipated enrollment increase of 25 per cent. The formula would be applied as follows:

$$\frac{1500}{30} \times \frac{3}{1} \times \frac{1}{28} \times \frac{1.25}{1} = \frac{5625}{840}$$

or 6.7 rooms needed for English.

Estimating Classroom Needs On a New Campus: The problem of determining classroom needs for a new junior college is not quite as simple as expanding an existing plant. In such cases the enrollment for which the plant is to be designed must first be established. The full-time student load policy must then be decided upon and the emphasis to be placed upon various subject fields must be determined together with an estimate of the percentage of total earned credits that will be earned in each subject field. In such cases the following formula would apply:

FORMULA II

$$\frac{\text{Anticipated Percentage of Total Earned Credits, to be Earned in Subject Field}}{\text{Full-time Student Load}} \times \frac{\text{Enrollment}}{\text{Average Class Size}} \times \frac{\text{Number of Class Hours Per Week Required to Earn One Hour of Credit}}{\text{Number of Hours in School Week} \times \text{Saturation Percentage}} = \text{Number of Classrooms Needed for Subject Field}$$

To illustrate Formula II, let it be supposed that the number of rooms needed for English is to be determined. There is an anticipated enrollment of 500 students and a full time student load of 15 hours; 8.4 per cent of total earned credits are to be earned in English; average class size will be 30 students; there will be one class hour per week for one hour of credit; 35

hours will comprise full school week; and saturation use of rooms will be 80 per cent. The formula would be applied as follows:

$$\frac{.084 \times 500 \times 15}{30} \times \frac{1}{35 \times .80} = \frac{630}{840} =$$

.75 classrooms needed for English.

In order to establish a basis upon which Formula II might be used for purposes of estimating classroom needs for a new junior college, a study was made of the earned credit distribution in forty-six junior colleges of varying sizes in California. The following table shows the results of that study:

EARNED CREDIT DISTRIBUTION BY SUBJECT FIELDS IN CALIFORNIA JUNIOR COLLEGES

Enrollment Group	*Below 500*	*500–1000*	*Above 1000*
Subject	*Per-centage*	*Per-centage*	*Per-centage*
Agriculture	2.9	2.5	1.5
Art	3.1	2.4	2.3
Biology	3.4	3.3	3.2
Commerce Lecture	4.6	4.4	4.4
Commerce Laboratory	7.4	7.0	6.3
Drawing	1.2	1.3	1.4
Engineering Lecture	1.7	3.4	2.1
Engineering Laboratory	.4	3.3	.6
English	8.4	7.4	7.7
Foreign Language	3.9	5.5	4.2
Health and Recreation Lecture	4.2	3.5	4.1
Health and Recreation Laboratory	6.5	6.3	7.2
Homemaking	1.7	2.9	2.2
Industrial Arts	4.3	3.6	2.4
Journalism	2.3	.9	.6
Mathematics	4.0	3.8	3.9
Mechanical Drawing	1.5	2.4	1.9
Music Lecture	2.5	1.9	2.6
Music Laboratory	2.4	2.6	2.3
Music Activities	2.6	3.0	2.5
Physical Science Lecture	5.2	5.2	5.5
Physical Science Laboratory	1.3	2.5	3.5
Psychology	5.8	4.5	6.0
Social Science	13.4	12.1	14.3
Speech Arts Lecture	4.5	3.9	4.2
Speech Arts Laboratory	.8	1.4	2.2
Total	100.0	100.0	100.0

It should be pointed out that the problems to be faced in any junior college situation differ with local conditions, educational philosophies, and board and administrative policies. Community educational needs should be carefully studied giving consideration to what best meets total needs of the population to be served. It should also be pointed out that the formula approach in determining teaching station needs is not all-conclusive but that as a mathematical process its results should be tempered with administrative judgment. ■

Economical Hints for Building an Instructional Materials Center

JOHN G. CHURCH
Associate in Educational Communications
The University of the State of New York

Education is basically a process of communications. Major educational purposes can be most satisfactorily communicated to learners through the best media the technology of today can provide. The availability of these media to teachers and students becomes of vital significance in an age in which new ideas must be relayed to citizens and prospective citizens with the utmost speed.

In recognition of the needs for communications media, different organizations have developed under such names as library, audio-visual center, and curriculum bureau. Since each of these organizations has as its basic purpose providing materials by which students can learn, there are several advantages to having one organization, an Instructional Materials Center, providing communications media. The advantages of centralization are:

1. The students and teachers and other users of the center would need go to only one location.

2. With the centralized cataloging possible, the user could very easily find various communications media which apply to particular topics.

3. Technical processes including ordering, receiving, and cataloging materials would not be duplicated.

4. Since many of the materials of concern both to the librarian and to the audio-visual specialist are the same (for instance, recordings), there would be less unnecessary duplication of purchases.

5. Staff time would be used more wisely because, rather than having two persons work part-time with audio-visual and library materials, a school could have one person working full-time.

6. Budgets would be more likely to have an item for instructional materials, whereas at present many school districts have either inadequate budgets or no budgetary allocations for audio-visual and library materials.

7. Personnel working with materials would be more likely to have a higher degree of professional training as a materials specialist, since this would be a full-time, major concern.

8. As new developments appear one comes again to the realization that the one permanent factor is change. One center, then, would be able to add whatever new communications media were made available without the center itself becoming out of date because it has stayed in a particular category such as library or audio-visual center.

One advantage would be most significant in school situations where at present there is a person working for two or three class periods as a librarian and another is given a few periods to work with the audio-visual program. The administrator could see how easy it would be to assign one person to handle both of these part-time jobs so that both he and the teacher would be able to devote their full professional attention to their respective responsibilities.

At present, when a school is asked to send a representative to a professional meeting concerning instructional materials, the part-time employee is not able to get away. As a consequence, the principal or assistant principal may feel the necessity to go to the meeting when actually he has too many other responsibilities to devote the time to the meeting and also to follow through with any practical utilization of the information proferred at the meetings.

The school materials specialist can play a significant role in assisting in improving instruction in a particular school. If he is working part-time on this, very often a teacher needing the most help might best be contacted at the very time when the part-time materials specialist is occupied teaching.

In conclusion, let it be said that centralization of communications materials centers and consequent better utilization of staff members can result in the improved administration of instructional materials needed for students today. ■

A report on a procedure on—

How to Evaluate School Building Cost

An attempt to establish a reliable standard for comparing school costs and values was recently completed by Utah's Department of Public Instruction. A written report of the project was given by Fred M. Fowler, state director of school plant planning, who originated and headed the study.

Various problems that instigated the project centered around the question of comparability of school costs, the best units for their expression, and the actual educational value of a given school building.

The personnel involved included a substantial number of state agencies and key persons, so as to insure solid footing for the project's start. First, an advisory committee was set up which included the president of the state senate; the speaker of the state house of representatives; executive officers of the state school boards association; the Society of Superintendents; Associated General Contractors; the state chapter of the American Institute of Architects; the Intermountain Institute of Consulting Engineers; and the Utah Congress of Parents and Teachers.

This general committee met three times. First, it considered the project and appointed a sub-committee, under chairmanship of an architect, to study the feasibility and procedure of the project. The sub-committee conducted research in the form of a series of "hearings" at which certain key persons presented ideas and suggestions. A report was read at the second meeting and referred to the district superintendents for their reaction. At the third meeting a definite recommendation was made to launch the project under the immediate hand of Director Fowler.

A central committee of five was named (two superintendents, two architects, and one engineer). It was understood that the evaluation of the procedure was more important than the cost comparison data per se, and also that the instruments developed might be useful to groups planning new school facilities so that design compromises may be made with an awareness of the values involved. Two major strategies were to be followed: (1) refine cost data to assure comparability, and (2) define selected values and provide a method for appraising the degree of their presence in the buildings compared.

The only costs considered for comparison were those of actual building construction. This excluded site acquisition, etc.; fees for architects, engineers, and construction supervisors; and furniture and equipment. The costs were applied per square foot, per pupil, and per teacher.

In establishing value ratings, two questions presented themselves: how many values should be considered and which ones would establish an accurate over-all value rating of a school building?

Seven Values for Seven Schools

Seven values were identified; juries were established for each one. Before visiting the seven schools selected for the study, the judges developed field instruments containing a description of the value, a form for recording judgments as to the degree of its presence, a summary appraisal of the building ("Satisfactory," "Fair," or "Unsatisfactory"), and sheets for recording field notes. Attention was to be centered on end results rather than on design solution.

It was understood that value received was only one aspect of cost. Myriad factors figured in the varying costs of the seven schools, but one conclusion seems justifiable: basic policy decisions by the owner of a building are chiefly responsible for costs, although design solutions may vary in economy.

Following are the juries' reports on the seven values as found in the schools:

1. *Educational Adequacy* (space quantity and organization with regard to display and storage facilities; chalk, cork, and peg boards; service lines and convenience outlets; and suitability for audio-visual aids):

Three schools were only fair because of lack of enough indoor space for play and auditorium activities and deficiency in display facilities and chalk board. The smallness of the sites also hurt their rating. The satisfactory schools had generous space provisions, including libraries and multipurpose rooms, attractive faculty rooms, and more space for school storage and custodial staff.

2. *Safety* (structural, fire and panic, and accident):

All the schools were satisfactory, but only one escaped critical comment. Most of the faulty items reported were inconsequential cost factors, but dangerous nevertheless, such as electric outlets near sinks; a sash that projected into a corridor from an open window; and acoustical ceilings that resist but at the same time conduct fire. Anti-earthquake design was insufficient in one school, whereas the structure of another was found to be superfluously precautionary in that respect. The report indicated that a good way to rate building safety is to follow the Uniform Building Code.

3. *Long-Time Cost Economy* (cost of occupancy after building is established, of maintenance and upkeep, and of operation — even including fire insurance):

All seven schools were satisfactory, but factors causing some critical comment were inadequate building materials, such as non-moisture-resistant ceilings in toilet rooms and exterior doors of wood, and miscalculation regarding structural elements.

4. *Aesthetics* (the social-emotional-psychological climate as influenced by the physical facilities):

This is the most subjective of the seven values and thus the most difficult to rate accurately. Factors constituting the basis for rating were the skill and appropriateness with which form, mass, scale, structure, color, quality, openness, relationship and flow of space, etc., had been used. One school was considered unsatisfactory in that it embodied "stark institutionalism" in its appearance and layout. The four schools rated fair drew critical comment for such things as loss of child scaling in the building interior or clash of exterior materials.

5. *Auditory Comfort* (ability of occupants to hear):

Good auditory environment has a low level of extraneous noises; uniform distribution of sound; sufficient volume; and proper reverberation time (decay of sound level). These are summed up in the term "Articulation Index," which is the measure of potential intelligibility of speech. By these standards, all seven schools were considered only fair. The faulty conditions in their acoustic setups might generally have been avoided at no extra cost. One common difficulty was a high noise level. Although the problem was not outstanding in any of the schools, it was noted for prospective school planners that initial design should coordinate the design for sound control and for fire resistance.

6. *Thermal Comfort* (air movement and temperature):

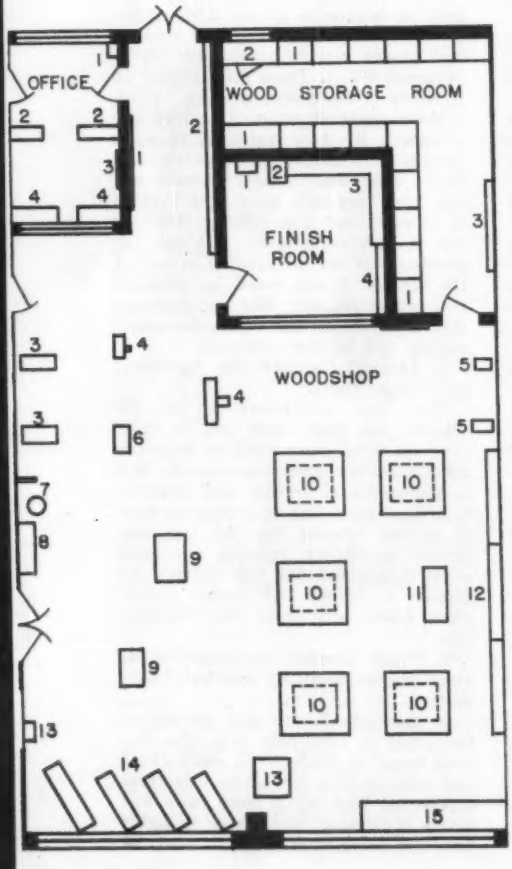
This was satisfactory in all the schools, but there were two or three common deficiencies, such as improper functioning of temperature controls, lack of uniformity in heating, and excessive solar heat gain. One of several findings of general interest was the fact that central ventilating systems are more easily maintained than unit systems and provide a cleaner and fresher atmosphere inside with more even temperature.

7. *Visual Comfort* (conditioning of visual environment by physical facilities):

In five schools this was unsatisfactory, and in two, only fair. The five were found to produce too much direct and reflected glare and severe brightness differences. Lighting in some cases was poorly distributed, and plastic skylights were not properly shielded. ■

W. K. DUNTON
Director of Vocational and Industrial Education, Warren, Ohio, Schools

Planning Industrial Education Facilities



Because vocational and industrial arts facilities on a square foot or cubic foot or per pupil basis cost more than ordinary classrooms, they are sometimes called expensive. But they can be built economically.

Economy does not mean cheapest. Economy means getting maximum value. There are three essentials to achieving economy in school shop construction. One is to do a thorough job of educational program planning. Another is to develop sufficiently comprehensive educational specifications. The third is to scrutinize the educational program and the educational specifications from a practical point of view with the aim of getting maximum educational value for each dollar spent.

The educational planning must be based on community needs. The educational specifications must include all the information needed by the architect to develop an adequate, efficient, economical design. And every item must be scrutinized for its educational value.

For most school administrators and shop teachers, shop planning is a once-in-a-lifetime event. Graduate courses notwithstanding, much local level lay-staff planning committee work can be classed as unguided study by a group of amateurs. Amateurs, not at school administration or vocational and industrial arts education, but at the job of developing educational specifications. Staff participation is essential, but because of limited or biased experience, distorted program values of obsolete attitudes need to be guided by a competent and experienced consultant.

Function of the Consultant

According to the 27th Yearbook of the American Association of School Administrators, many boards of education have recognized the desirability of employing an educational consultant. The educational consultant does not assume the functions of the architect. According to the Yearbook, "The consultant is a professional educator, trained and experienced in school administration. He has acquired a technical understanding of the relationship of the needs of the educational program and of the community to the school plant. He should have competence in the educational applications of much technical data and should be able to reflect in planning the experience to be gained through maintenance and operation of school plants. Also, he has skill in planning the internal arrangements of all parts of the school building so that effective operation may be secured. If properly qualified, he will be of immeasurable assistance."

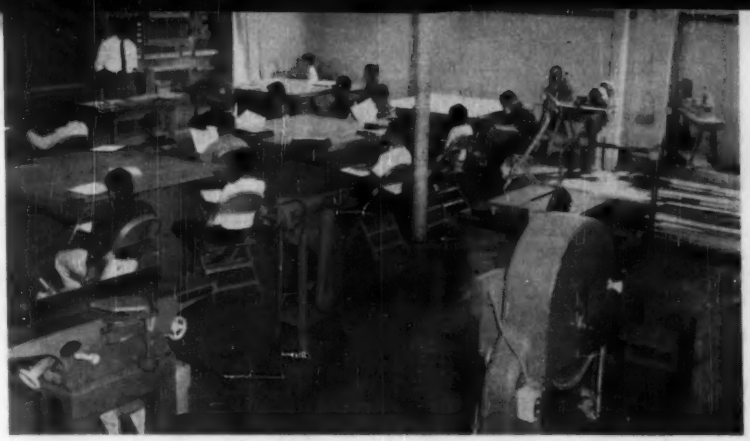
The Commission also suggested that "in employing an educational consultant, consideration should be given to the experience of the consultant in school administration, the amount and quality of his experience and education in school building planning, his contributions to building research and literature, and his personality."

The role of the consultant as presented in this article is based on the premise that the designing of a building, a shop, or a laboratory is not the function of a consultant. Educators who pose as design experts and architects who pose as educational specialists should be looked upon with equal distrust. Most examples of poorly planned facilities are the result either of educators playing architect or of architects being forced, by lack of information, to play educator. It is the function of the educator to plan the program.

It is the function of the architect to design the facility to house the program. It is the function of the consultant to lead the school personnel in their program planning and in their development of the educational specifications.

In describing the shop planning consultant's leadership function, it should be noted that his work does not take the place of the over-all school building survey often made of an entire district by teams of educational consultants from universities. He usually works closely with such teams but in that relationship should be considered an auxiliary consultant. His most important help to the general consultant is in the area of determining the operating capacity of the building.

His most important contribution to the local staff is in helping them determine the answers, or the best methods of securing the answers, to certain basic questions; questions that must be answered if the educational specifications developed are to provide the architect all the information he needs to design an efficient, economical facility.



"Good planning practice today emphasizes the development of complete educational specifications before the first line is drawn on paper."

Modern Planning Practice

A generation ago it was common practice to begin the educational planning of shops by drawing a layout showing space and equipment. Unfortunately, in some cases this practice is still followed. Good planning practice today, however, emphasizes the development of complete educational specifications before the first line is drawn on paper. Educational specifications have been defined as: *An analytical description of the purpose, method and organization of the educational program of a community prepared as a guide to the planning of educational facilities.* Such a definition is equally applicable to shop programs and shop facilities as part of the total. Educational specification preparation is a complex job on which the local staff ordinarily requires guidance. The following material describes problems on which help is needed. The examples are of schools where the educators were highly competent in their fields but lacked experience in planning or knowledge of the techniques of educational specification development. The sequence followed is that of typical educational specifications.

Determining Community Needs

Determining community needs is not simple. Where to secure the necessary data and how to interpret it are major problems to the inexperienced. A city was once visited where the school person responsible for determining the needs for apprentice training did not even know the location of the Central Labor Council hall or the names of any union or contractor organization officers. Vocational agriculture shops with wood turning lathes not necessary for the program are commonplace. Because of the influence of tradition, many industrial arts programs include only woodworking and mechanical drafting. Such situations as these indicate lack of correlation between community needs and facilities.

Program Policies

To determine and secure formal approval of *policies regarding the program* is sometimes a difficult problem. Once the architect asked for help on the layout of trade shops for a system that had not decided if there was to be a co-op program for senior boys or if the training was to be provided in the school shops. Such help cannot be given. Only after the planned program is given official approval can effective facility planning begin.

Philosophy Adoption

The *adoption of a philosophy* of industrial arts or of trade and industrial education, or of industrial education is sometimes deferred until after a building is complete. This may seem inevitable when the planning is done before the staff is employed. But a facility cannot be satisfactorily planned unless the purposes it is to serve are defined. If the subject of automotive mechanics is taught from the consumer viewpoint, then the physical facilities needed are quite different from those required for the skill training of auto mechanics. The decision regarding whether industrial arts shops are to be unit, or general, or unit-general must be made before they can be designed.

Group Characteristics

The determination of the *group characteristics of the students* to be served poses an important and sometimes overlooked problem. The staff of a new $8,000,000 vocational high school recently faced a crisis in this connection. The building was planned to house 3000 above-average students preparing for entrance into technical occupations and skilled crafts. When 800 slow learners, who had previously attended special classes, were included in the group initially assigned to the building, it became obvious that the facilities were not planned to meet their needs and would not permit the type of program required for slow learners.

Projection of Enrollments

The *projection of probable enrollments* involves many different factors and is a most complex problem. The usual school building survey report includes grade-level projections based on birth records, attrition rates, and probable annexations or consolidations. However, the ordinarily used subject enrollment coefficients seldom apply accurately to industrial arts, and almost never

to vocational education. These enrollments depend more upon community needs and program organization. One city planned a new six-year high school's shops for a program that did not include the eighth grade. During construction a decision was made to include the 180 boys in this grade. Facilities became inadequate before they were complete.

Program Organization

Difference in types of *program organization* vitally affect shop planning. The question of single or double periods for industrial arts must be resolved before any one of several basic facility problems can be solved. The number of periods of related instruction daily for vocational subjects must be known. The time of day facilities that will be used by apprentices must be established. All these relate to the number of teaching stations required. Yet one of the most widely read books on school building planning states — regardless of the type of program or organization — "there should be one classroom for each four shops." That could be one too many, or three too few.

Method of Instruction

The *method of instruction* to be used, particularly in vocational shops, must be determined before space or equipment requirements can be considered. Automotive training on live cars has different requirements than on dead engines. One city system built an elaborate carpentry shop; then used only the classroom at school and taught the manipulative phases of the trade on outside construction jobs. Such an unwise expenditure can result only in justifiable criticism. If visual aids are to be used effectively light control must be included in the educational specifications.

Teaching Stations

Even the determination of the *number of teaching stations* necessary requires the consideration and evaluation of factors not usually considered in other educational areas. General grade level enrollment projections and past adult enrollments are not sufficient. Information regarding projected annual placements, the number of trades to be taught, local apprenticeship trends, time of day apprentice classes meet, effectiveness of guidance and recruitment programs, and different class maximums must be carefully weighed. Local staff enthusiasm or lack of adequate information may result in unreasonable and costly construction. One city has a fine unused die shop and a badly overcrowded machine shop because of failure to consider such factors.

Equipment Selection

Problems of *equipment selection* must be studied and agreements reached before the building can be designed. Sometimes this is not done. And sometimes when it is done it results in drawn battle lines, with administrators thinking in terms of minimums and teachers in maximums. The problem is to be neither penny-wise, nor pound-foolish, but to determine exactly what equipment is required to meet the educational needs of the groups to be served.

Some schools have only unusually large, or special, or obsolete equipment because of too great dependence on government surplus; others insufficient or too small equipment because of their failure to develop as a part of the educational specifications a sound financial plan based on realistic requirements. The old saying "let's get the building first" sometimes means that only that will be done. What was to be a vitally needed electric shop in one city is now used as a kindergarten because of failure to develop a definite plan regarding selection and procurement of equipment. Realistically, a formal policy on equipment replacement could become a part of the educational specifications.

Space Requirements

The *determination of space requirements* can develop into either one of the most controversial problems or one of the most neglected problems in building planning unless it is approached in accord with the title italicized above, with the emphasis on the final word. Some texts, many magazine articles, and certain state educational authority manuals set space minimums in terms of square feet per pupil. Such standards are based on the assumption that no educational specifications will be developed. Too, minimum standards have a tendency to become maximums in practice.

Differences in class size, in methods of instruction, in types of jobs or projects to be developed, in size of equipment, and in need for material, supply, and tool storage, all have bearing on the need for more or less space than that indicated by "standards."

It is to be expected that classrooms for a given educational level will be the same size, but designing all the shops the same size almost always indicates complete lack of real educational planning. New building floor plans in educational and architectural periodicals showing several shops the same size are always cause for skepticism.

Service Requirements

Consideration of *mechanical and utility service requirements* is often deferred until late in the planning process. Design problems and the pressure of time can result in omissions and inefficient installations if these needs are not considered early. Horrendous examples are too numerous and well known to require illustration. But inefficient arrangement and lack of flexibility in mechanical and utility services are the most chronic complaints of teachers about their shops.

Cost Determination

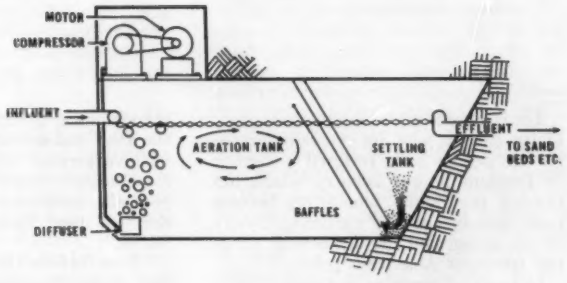
The *determination of costs* becomes a part of the educational specifications if real economy rather than either mere cheapness or foolish extravagance is to be achieved. Too often vocational and industrial arts programs are planned and shops designed on the basis of a predetermined amount of available money. If the needs of the community and students are to be met, the program must be planned first. Then, if it is beyond the financial ability of the district, it should be tailored to what can be done immediately, with provisions for expansion when sufficient funds become available. Conversely, in some schools, as a result of a combination of aggressive leadership and lack of educational planning, too much has been spent simply because the money happened to be available.

The foregoing statements of the basic planning problems, the examples given of poor solutions, and the illustrations of factors that should have been considered, describe real situations. In each case the teachers and administrators were competent, skillful men. Their only inadequacy was lack of planning experience and lack of information regarding necessary educational specification content.

The competent, experienced shop planning consultant can be of the greatest assistance to the local staff and of the greatest value to the local school authorities in three ways. He can provide leadership in the program problem studies; he can provide know-how in the preparation of the educational specifications; and he can draw upon his background of experience in the critical analysis of the educational values of all space and equipment proposals. ■

A Potential Solution of School Sewage Problems in Fringe Areas

DALE J. POST
Grand Rapids, Mich.



A design of a typical aerobic system.

Many schools outside the areas of municipal sewage disposal service must use a package-type disposal system, such as a septic tank arrangement. In areas with impervious (clay type) soil conditions, the septic tank is very ineffective, because the treated sewage (effluent) is generally too thick to drain properly into the ground, and well water of the community is frequently polluted.

As the suburban population continues to increase, more schools are constructed in these fringe areas. In one Michigan township, for instance, a high school had an acute sewage disposal problem before it was occupied. Several months ago the health authorities in this locality were forced to halt any new septic tank installations, including the one for the school, because of the increasing danger of pollution. They had found in many of the township wells synthetic detergents originating from the septic tanks, which were ineffective in the impervious soils in that area. Although these detergents were considered harmless, it was a positive sign that some of the effluent was reaching the wells. If this type of draining increased, it was possible that a greater and faster flow of effluent could carry harmful organisms into the well water.

The ideal solution is to build an interceptor pipeline system to the nearest municipal central sewage plant. The time estimated to complete the project, however, was at least three years, provided there were no delays in the bond issue, system design, etc. Meanwhile the nearby municipality would be required to expand their plant, since it was already operating in an overloaded capacity. This proposed action did not solve the school board's problem, since the opening was set for this September. If the school doesn't open by that date, the township's other high school will have to be used in an inadequate double-shift session, to accommodate the increased student enrollment. This would mean more expense and a great deal of inconvenience.

Another system had to be found. After an investigation was made, an aerobic system appeared to be the answer and was put under consideration by the school board. It was found to have expedient and efficient sewage decomposition, relatively odorless effluent, and adaptability to impervious soils. The complete installation of the system requires only a few days. The cost is about double the cost of a similar size septic tank, due to the use of a motor, compressor, etc. Based on previous experiments, however, the aerobic system has proved to be well worth its cost in many communities.

The Aerobic System

A typical aerobic system works on the principle of decomposing the sewage by an excessive air treatment. The aeration tank is usually rectangular with a means to force air in near the bottom at one end through a suitable diffuser, which breaks up the air into small bubbles. The air is usually forced in by a rotary or centrifugal air compressor after the effluent leaves the tank. Filtration through sand beds is advocated to obtain a high degree of secondary treatment. These beds are sometimes used to clean the effluent more before it is discharged into a water course, such as a river or a lake.

In the aeration tank a variety of treatment activities takes place at the same time. The turbulence produced by the excess air tends to break up the sewage solids. Aerobic bacteria and other living organisms present in the sewage are stimulated to activity by the abundant oxygen. These bacteria will then digest the organic sewage in the tank. They will divide and multiply, continuing this cycle as long as the tank is supplied with the required oxygen.

After digestion, the sewage flows to the settling basin, and only the heavy sewage will return to the aeration tank for further treatment. The final effluent flows over a weir to the receiving stream, where it is siphoned through a sand filter or some other disposing arrangement.

The most desirable feature about this system is the long period of oxidation which creates extensive sewage decomposition, which means better drainage in impervious soils.

An average cost of a complete aerobic system with a sand filter bed for a school accommodating 600 students is approximately $11,000. In this case, a 9000-gallon tank would be required, based on 15 gallons per person per day. The dimensions of the tank would be approximately 15 feet in length, 10 feet in width, and six feet in depth.

The big difference between the aerobic system and the septic tank system appears to be that sewage will break down three times as fast when excessive air (oxygen) is used.

Since the aerobic system is a comparatively new development, more engineering and performance data are needed. Although many satisfactory results have been achieved in various communities which employ this system, such as Benton Township, Mich., and Vidalia, Ga., more tabulations of various sewage tests will prove or disprove the validity of the system. The existing experimental and commercial aerobic sewage treatment and disposal devices, however, are regarded as a significant development in sanitary engineering practices and should be considered in future fringe-area school developments.

The preceding information was based on a term study recently made at Michigan State University. ■

WORD FROM WASHINGTON

Meeting the Emerging Threats to Local Curriculum Control

ELAINE EXTON

Local boards of education composed of lay citizens who are typically elected by the people have fostered a climate of freedom in our country which has enabled the public schools to become great well-springs for nurturing loyalty to our nation and the democratic ideals and freedoms Americans prize.

In times of peace as in times of peril our unique system of locally controlled public education has served the purposes of our free society well. It has been effective in creating "a sufficient unity among all classes and groups and regions in America to keep a far-flung people in a vast and varied (land) united."* The creativity that it has nourished in our people has brought our country the highest material abundance and standard of living of any nation.

For over three centuries education has flourished in America under local control. The conviction that the public schools belong to the people is backed by history and custom. At the present time a body of law evolved through the years supports the local school board as an institution of government. It operates under delegated powers from the state.

School Board Autonomy Challenged

Yet, today, the belief that locally controlled education is essential to the continuation of our democratic way of life is being challenged. It is contended that to win the ideological-technological contest between our nation and international communism, our education system should have more centralized direction of the schools and what they teach.

Answering those critics, within and without the ranks of education, who maintain that "school boards may work very well within the local situation, but as a device for meeting the national goals of education they are inadequate," Robert Willis, in his presidential address before the 1960 Convention of the National School Boards Association, made a vigorous case for local control of education.

"We recognize that the task is large," he said, "but we are convinced that the school board system can create locally the kind and quality of education that, in the aggregate, nationally, will produce an educated citizenry prepared to support the leadership role in the world that has been thrust upon the United States.

"Even before the appearance of the first Soviet Sputnik, there was a discernable trend among board members to re-examine the problems of education and to welcome new approaches toward their solution."

Moreover, as another indefatigable lay champion of American public schooling, Mrs. Agnes E. Meyer, so aptly reminds us: "Instead of imitating the Russians by becoming educational authoritarians, we must develop a thoroughly democratic philosophy of education which will serve the purposes of a free society as effectively as Soviet education serves the purposes of despotism!

"If we deprive the state and local school boards of their autonomy," she warns, "we undermine our whole democratic structure since local control of education is the strongest bulwark we have left against the growing tendency in our country toward over-centralization of power in the Federal Government, in our military heirarchy, and in our industrial bureaucracy."

Developing Dangers to Local Control

In the struggle to preserve and improve the quality of our American system of decentralized public school control, it is apparent from the blasts already fired and preparations now under way that local control of the curriculum will be a vital battleground in the immediate future.

To preserve the time-tested practice of substantial local determination of the curriculum, school board members need to be aware that the dangers threatening its continuance may assume a variety of guises. Some of the new influences that could lead to a loss in decision-making at the local level unless promptly recognized and wisely handled are identified below.

Unless recommendations of prominent personalities and national bodies concerning the improvement of instruction are carefully evaluated at the local level and judged in the light of local needs and views, danger to local curriculum determination can lie in proposals that originate inside the teaching profession as well as in those emanating from outside it.

The suggestion that Congress set up a Council to work out educational goals or national standards for public schools may be used to illustrate a proposal from an outside source which, if carried out, would fall in this category. Examples of proposals drawn up by educators include a National Committee on the Instructional Program appointed by a professional organization and a National Commission for Curriculum Research and Development staffed with schoolmen, laymen, and scholars.

This hazard has been pointed up in recent writings of Myron Lieberman, currently Director of Basic Research for the Educational Research Council of Greater Cleveland and a former public school teacher and university professor, who predicts that "eventually, authority over the curriculum will be lodged with national professional agencies." He further prophesies that "the decline of local control of education means more than a simple transfer of authority from communities to the states or to the federal government," saying, "it can, and indeed it must, mean a tremendous increase in the power of the teachers as an organized group."

Voicing his conviction that we are about to move rapidly toward a *national* system of education, he explains this is not necessarily the same thing as a *federal* system where the schools would be operated by the Federal Government, but that "education might continue to be the legal responsibility of state and local communities, yet become substantially similar all over the country as a result of non-governmental pressures."

Stressing that the genius of American education has been placing responsibility for what is taught and how it is taught in the local community, Robert R. Leeper, associate secretary of the Association for Supervision and Curriculum Development of NEA, cautions against a so-called national curriculum.

Such a centralized approach, he believes, would tend toward uniformity, rigidity, and a decline in experimentation. Even more importantly, in his opinion, it would dry up the local initiative that has made American education so outstanding in the world and result in parents and citizens losing interest in what is taught and how it is taught since they would soon (mistakenly) come to feel that a central authority is best able to judge.

Imposing massive evaluation schemes, national test norms, or national curricula holds no promise of actually improving the quality of education in the opinion of Arthur Foshay, the Executive Officer of the Horace Mann-Lincoln Institute of School Experimentation, Teachers College, Columbia University. He reports that "wherever this has been done — and it's been done all over Europe — it has functioned in one way, and in one way only: to turn the public schools

*Public Education and the Future of America, Educational Policies Commission, 1201 16th Street, N.W., Washington 6, D. C., 1955, p. 68 ($1.50 a copy).

into a monster screening device, which deals with the top 15 per cent *at the expense* of dealing with the lower 85 per cent."

Such a solution, he says "is inadequate, even in Europe (where) there are great educational reforms under way in France and England because of it." He holds that "not only would it be disastrously bad public policy in a popular democracy to use the most intimately known public institution in a way that would alienate 85 per cent of the population, but it would wholly miss the question of quality."

Or the seeds of national control may be carried by several current programs which have been set up by federal legislation. An example is the National Defense Education Act which, by offering federal grants for particular curriculum fields, stimulates local school districts to direct their attention to these subjects, when, as Frederick M. Raubinger, the New Jersey State Commissioner of Education, points out "in many instances the real needs of the school districts lie in quite other areas which may have to be neglected in order to qualify for the money which the Federal Government makes available for science, mathematics, and foreign languages."

Pressures toward a uniform curriculum might also gain a toehold if certain projects now being discussed by representatives of educational associations and representatives of the Federal Government were to find their way into the U. S. Office of Education's budget for the fiscal year beginning July 1, 1961, or thereafter, and win Congressional approval. According to usually well-informed sources, these include a study of the American culture, which, among other things, would determine the concepts to be covered and the objectives to be met in a standardized curriculum for children of different ages.

In-roads to local determination of the curriculum can also come through certain technological developments. One example of this might be teaching machines if the programming of instructional sequences is devised outside the school system. Another example might be airborne television if instructional telecasting by a nonlegal *ad hoc* group transcends school districts governed by local boards and cuts across state lines. A third example might be the establishing of a regional or national Educational Television network, particularly if done through funds that provide for teaching the same televised curriculum in classrooms throughout a region or across the nation.

The greatest peril of all may lurk not in the direct frontal assaults which are plainly visible, but in the gradual nibbling away of school board authority by a combination of outside forces which have no official or legal responsibility for the schools whatever and are beyond the control of parents and other citizens. Certain programs of some of the foundations and national testing agencies fall in this category. Such encroachments can also stem from automated instruction and restrictive federal legislation.

Preserving Desirable Practices

As these outside pressures mount, how can school boards make certain that the basic values of our American educational heritage are retained in charting new educational paths to meet the needs of the present and future?

Replies Finis E. Engleman, the executive secretary of the American Association of School Administrators, "If the team we have of the Board of Education and professional educators continue to play their rightful roles, each of them studying and intelligently reacting to the changes in our society and the emerging demands for new competencies of the citizen, we can keep these responsibilities where they belong and where they should rest."

In the final analysis, he stresses, the Board of Education, which has the responsibility for determining the nature, extent, and broad programs and policies of the schools, also determines the goals and broad areas that should be taught and seeks financial support to carry them out. Representative lay citizens committees, he thinks, can profitably advise the board in determining the broad goals and the wide blocks of the programs.

The details of what is taught, the instructional and evaluative methods to use, and the materials to effectively implement them, Dr. Engleman states, are professional matters which should at all times be left to the professional staff.

Lay school boards depend to a great extent on the counsel and recommendations of the school administrator on such matters as curriculum and supervision of instruction, reports Fred G. Thatcher, executive secretary of the Louisiana School Boards Association. In these technical and professional matters, he states, "Boards are more likely to approve recommendations made by the professional administration than they would about material matters such as the general business affairs of the school." The board generally will follow the lead of the administrator in such things, he says, if it has confidence in his professional ability and integrity.

Providing for Citizen Participation

"It is an illegal assumption of power for any individual or group, voluntary or legally constituted, to impose on a free people a program which the people themselves do not subscribe to or support," comments Carl B. Munck, a former National School Boards Association President. To prevent this at the national level, he explains, "A Constitution was devised to balance three separate and equal operations of government, so that no one of them would seize power and dictate its concepts, be they social, economic, or political."

On the local level, and especially in the matter of our schools, he points out, "We still can hear the voice of the individual and benefit by his valued contribution to the improvement of education."

The important thing, he underscores, "is that the best thinking and effort be contributed by the members of the community, however they may designate the group through which they function." The more of these groups of citizens there are interested in education in any community the better, in his view, so long as they operate on the basis that domination by any one of them "is a distinct loss to the total interest and support that might otherwise be secured." In other words all should have a fair chance to voice their views, but none should be allowed to "take over."

The welfare of education requires that ways be found to discover and to use good ideas and practices from all sources, emphasizes Edgar Fuller, executive secretary of the Council of Chief State School Officers. He believes that a good way to insure that "all the people shall be able to contribute appropriately to the determination of what is taught in their schools through means that best achieve the purposes of our system of education" is to establish sound procedures for (1) discovering and using good ideas from *all* sources, (2) for rejecting what is unsuitable, and (3) explaining the reasons for these actions to the public.

Through such a mechanism, he declares, without dictation or domination, contributions to curriculum improvement can be made by professional groups, academic specialists, interested groups of citizens, career critics, special friends of the schools with axes to grind, commercial suppliers, philanthropists, individuals willing to supply large funds to promote pet ideas, or even local, state, or national governments.

Role of In-Service Education

Dr. Fuller further suggests that combining in-service education of teachers and programs of curriculum development provides a pattern for working out curriculum change "that best assures improvement within the framework of educational policy and experience, protecting against undue influence on the one hand, without sacrificing opportunity for the innovator to be heard on the other."

Recognizing that to hammer out locally the revisions necessary to keep the instructional program up-to-date will require extra time that the teacher will not be able to spare while engaged in a full teaching schedule, he proposes establishing a flexible eleven-month school year to permit the schools to concentrate effectively on curriculum development as a function of in-service education.

If this is done, he says, "Teachers so engaged could receive academic credit and advance on the salary scale, (while) those not so assigned could attend summer sessions, travel for professional purposes, or conduct remedial and enrichment summer courses in the schools, and so forth." Bringing university scholars and other content experts to the school system, which Dr. Fuller regards as "the logical laboratory for curriculum work," is another feature of his proposal. ■

the
AMERICAN
SCHOOL
BOARD
JOURNAL

William C. Bruce, Editor

SCHOOL ADMINISTRATIVE DECISIONS

THE process of arriving at administrative decisions in city school systems has been mistakenly considered to be relatively simple, and educators have frequently argued that a basic educational philosophy, a unit type of organization, and an efficient professional administrative staff are sufficient for prompt administrative action. Just one major consideration — the educational welfare of the pupils — need be considered. In practically all instances, however, this point of view is an oversimplification; it must be related to the fact that most requests for administrative decisions arise from teachers, principals, members of the board of education, and/or citizens, and a considerable process of discussion of a wide variety of interests must precede any final action.

John M. Pfiffner, writing in the *Public Administration Review,* calls attention to the fact that in most normal situations — and this applies to schools — at least a number of norms are actually put into effect before an administrative decision can be made and put into effect. He suggests nine norms: (1) recognition of a problem; (2) collection of pertinent data; (3) classification and analysis of data; (4) inventory of means for utilizing data; (5) listing of alternative solutions; (6) evaluation of alternatives; (7) the actual decision; (8) implementation; (9) follow-up and evaluation of what has been done. Quoting an earlier writer, Nicolaidis, he found that in many cases public officials really begin the process of arriving at decisions with step six and merely consider two or more alternatives from which they choose one line of action. It may be added that in most school systems this final line of action depends upon the democratic attitudes of the superintendent of schools and the strength of the board of education as the final arbiter in all policy and program-making decisions. Just here the process may be what the British call "muddling through" or it may be the use of sound reason as the controlling element.

In the rush of confusing work, problems in school administration are too often solved by merely weighing one or two alternative proposals. A careful use of all the nine steps enumerated above will perhaps require more time than the average school executive and the policy-making board of education are willing to give. Such consideration, however, will in the long run be an advantage because it will eliminate the evil effects of rash decisions and unexpected outcomes.

SCHOOL BOND ISSUES

WHILE local school boards represent a comparatively small portion of the total public debt of the United States and of the several states, there is evidence that in some states at least the school bonds represent fifty per cent or more of the total public indebtedness. It has been said by bankers that the dangers of business recessions are due entirely to excessive use of credit, and while this maxim is intended for private business and industry it applies equally to permanent public debts.

In any school building enterprise the entire problem of financing deserves careful study from the standpoint of the overall cost and the long term effect on the local school district to meet its responsibilities for an adequate educational program. It seems strange that as reported by Dr. Elmer C. Deering in *School Life,* nearly 30 per cent of the school bonds issued in recent years are sold for terms of 25 years and over. Only 18 per cent have a total term of 15 years or less. The majority of bonds, 52.5 per cent have serial maturities extending 15 to 25 years. Some of the unreasonable cost of school bonds is due to the fact that Moody's rating of the school districts is rarely AAA and deserving of the lowest interest rates. When the rating is as low as BAA, the interest rates are correspondingly high.

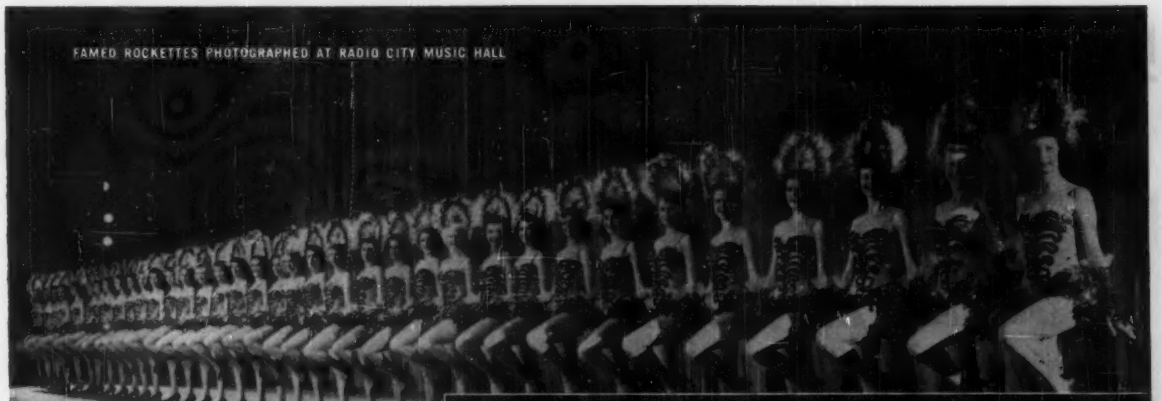
The present situation suggests the need for state support of local school bonds. It is difficult to understand why the states do not put their high credit rating behind bond issue of the small city and rural school districts. Even New York State, which has admittedly a strong state department of education that exerts continuous influence on local school districts, has refused to back local school bond issues.

The long-term financing of schools deserves more consideration than it is now receiving. The local control of school systems is a precious right, but state support and supervision of permanent school financing would be helpful in avoiding many expensive errors now committed by school boards.

A PRESENT PROBLEM

"FLEXIBILITY" is a present objective in planning school buildings that is causing school authorities and architects especial concern. Back in the '30's and '40's, it was felt that demountable partitions between classrooms would permit easy changes in the number and size of classroom areas. Piping, wiring, and other built-in facilities were placed under the floors at the windows, or in the corridor walls. Schoolmen now agree that the movable partitions do not solve the problem of flexibility.

One prominent school-plant authority says that the only solution of the problem of flexibility is in the enlargement of classrooms — up to 3000 sq. ft. of floor area — and the use of movable storage cabinets, shelving, bookcases, and clothing storage arrangements. This proposal overlooks the fact that such huge elementary classrooms will be extremely costly for the average school district. How a teacher can maintain rapport between herself and a class of 25 or 30 children in a room measuring 50 by 60 feet is not clear. Unless the special arrangements are made for lighting and sound control, the easy all-important teacher-pupil communication will be seriously hampered. The problem of flexibility requires much study and experimentation. Forseeable changes in class organization and teaching method within the near future do not warrant excessively large classrooms. In fact, it is difficult to justify an elementary classroom larger than nine hundred square feet.



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N. S. B. A. REPORT

NSBA '61 ANNUAL CONVENTION BEARS DOWN ON SCHOOL BOARD RESPONSIBILITY

MAXINE PINSON
Editor, NSBA Publications

Keenly aware of the critical educational problems confronting every community of our nation, NSBA President Roy O. Frantz, of Pueblo, Colo., has announced that the theme of the 1961 NSBA Convention in Philadelphia, May 4–6, will be: "Responsible School Boards Provide Educational Leadership."

President Frantz explained, in announcing this theme on August 14, 1960, that it is not enough to defend local control as a good in itself, regardless of how it is exercised. If the citizens of America are to retain their legal voice in education, that voice must be expressed with insight, courage and responsibility by the local boards of education, who represent the citizens.

Local Insight and Freedom

The vast good that can accrue to education through local insight and the precious freedom of experimentation will thrive, Frantz stressed, only as long as local boards comprehend and discharge their full responsibility. That responsibility is no less than to provide the best possible educational opportunities for the youth of every community, large or small, President Frantz stated.

In the world today, he pointed out, the great contest is one of mind against mind — method against method. In this contest, education is vital as it never was before in the history of our nation. With these realities in broad sight, the theme of the 1961 Convention was determined.

Large Questions Asked

The theme will be enlarged upon and developed by an outstanding keynote speaker at the first general session. The following general sessions will take up large problems that test school board acumen and responsibility. The questions that will be debated are: (1) Financing education in the Sixties; (2) Should there be national goals for education? (3) Are the schools attempting too much? and (4) Is local citizen control of education obsolete?

These questions will be debated by protagonists pro and con. The convention will face these questions openly, frankly, and with a mind to seeking workable ways to answer the problems posed.

Discussion Time Planned

The convention will not be overweighted with speeches. Ample time is being set aside for table discussions, group by group, following the general sessions. Those in attendance will be urged to speak their minds, express their viewpoints, and test their own ideas on and reactions to the viewpoints and reactions of other participants. Board members are urged to attend and to "sound out" their local communities before they come to Philadelphia so that they can really represent the thinking of their citizens and then report back to them.

Great Convention Exhibition

A unique kind of educational event will be the 1961 NSBA Convention Exhibition, which will provide concrete help in buying wisely for the schools. The exhibition for 1961 has been planned with the close collaboration of a special exhibitors advisory committee, appointed by President Frantz, and working closely with NSBA headquarters staff. The exhibition will be an informative, fascinating display of reliable, nationally-known products and proven services for schools.

The exhibition area at the 1961 convention in Philadelphia will be spacious and comfortable, easy and inviting to visit. Individual displays will be conveniently arranged so that guests may linger, look and chat with the exhibitors. Alert board members will want to visit the exhibits often, notepad and pen in hand, to jot down items of particular interest to their districts. They will be able to see and examine, in person, products and services on which they must pass judgment when called upon to make purchases for their schools. There will be an expert at each display to help board members. Out of this counsel, it should become easier to develop a standard of judgment on which to base wise decisions and recommendations.

NSBA President Roy C. Frantz

Architectural Exhibit

At the 1960 Annual NSBA Convention, the exhibition was augmented by the inclusion of a special new architectural exhibit. At the 1961 Convention, there will be another stimulating architectural exhibit, including refinements, improvements, and additions to bring concrete help and foresight to all school districts, regardless of size or location in the nation.

Another attractive feature of the 1961 Convention is the ruling that there will be *no charge* for wives and husbands of board members and superintendents who are properly registered. Guests of those registered will be admitted *free* to the exhibitions as well as to the regular convention meetings.

Advance Registration Urged

In order to make attendance easier and to conserve time at the convention, this year the NSBA is urging that all who can possibly register in advance do so. Board members and superintendents are encouraged to register by mail, and thus avoid the delay and inconvenience of standing in line and waiting around to register after they arrive in Philadelphia.

Advance registration forms have been mailed out to school districts throughout the nation. It is hoped that these will be returned as promptly as possible, along with names of wives and husbands who will be registered free, in order that details may be out of the way well in advance of convention time. Those who register in advance will be served at a special "VIP" desk at the convention in Philadelphia. Their identification badges and convention materials will be ready for them upon arrival. All who register in advance will have some extra time to look up friends and make new acquaintances.

Attendance Demonstrates Responsibility

Never before was it such a privilege or such a responsibility to be a member of a board of education. Board members who really care what is happening in education will be present, if at all possible, to *improve* in their service and to *prove* that "Responsible School Boards Provide Educational Leadership." ■

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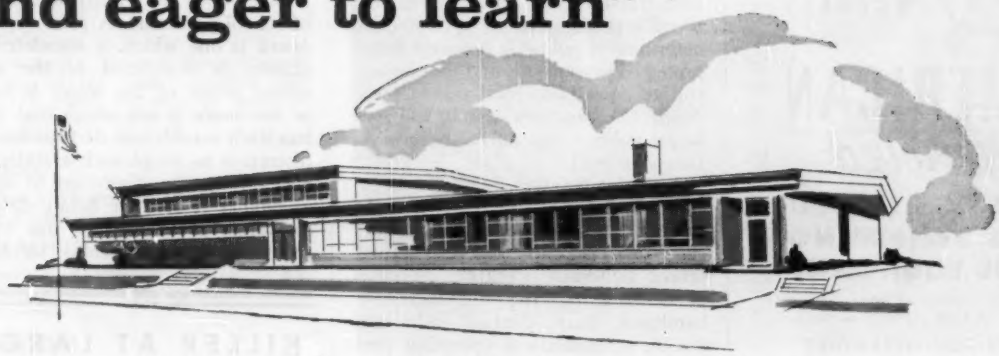

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POLICY HANDBOOKS

(Concluded from page 14)

indicates, is adopted by the chief school officer and his staff and contains the administrative directives under which the school system operates. It is not up to the board to adopt the material placed in the administrative book, but it is the board's prerogative to review it to determine if policy is properly interpreted. The purpose of the administrative book is to spell out in more detail the practices which will put board policies into effect on the system-wide level.

Just how detailed such a book becomes depends upon the size and complexity of the school district. If the district is a large one with several school buildings operating as independent units, the administrative handbook may contain relatively flexible statements of operating procedure. It may be possible to cover most situations with more stringent regulatory provisions if the school district is a small and compact unit. Caution must be exercised, however, because many situations will arise even in one school that cannot be covered by rigid rules. It appears to be good practice, therefore, to adopt system-wide operational procedures and regulations that are somewhat flexible.

Overlapping, Not Identical

It is considered desirable for various school personnel to be provided with handbooks which sum up information of special interest to each group, that is, a handbook for teachers in a certain school, one for custodians, another for clerical help, and so on. Certain policies of the board and regulations and operational procedures adopted by the superintendent are of immediate and personal concern to teachers and undoubtedly should have a place in their handbook.

Moreover, there are some types of information other than policies which are pertinent to the handbooks for teachers and/or students which would not appear in these for the board or administrators.

In summary, let it be said that the difference between policy and rule is the degree of discretion left to the individuals involved at the various levels.

The decision to include a particular statement in a specific handbook should not be based solely upon whether the statement is a policy or a regulation. A basic criterion to be observed is that the information is of sufficient importance to the individual for whom the handbook is intended. Thus some policy statements should appear in all handbooks — administrator, teacher, and student. On the other hand, another might appear only in the board handbook since it would concern board members and the chief school officer exclusively.

A distinction also exists between a policy of or for a particular portion of school personnel. A *policy* for *the board* is one which is mandated by statute or regulation of the chief school officer of the state. A *policy* of *the board* is one which that body has itself established. It thus has the discretion to adopt such a statement and retains the discretion to revise or modify it at some future date. A *regulation for teachers* is one which requires specified actions by them without discretion, whereas a *teacher regulation* allows them to exercise discretion. This is true whether the regulation was prepared by the board, administrators, or teachers themselves. Again discretion is the deciding factor.

The actual statements of policy reflect the philosophy of the particular board of education which devises them, states the Manual. What is construed as a statement of policy by one board, therefore, may not be acceptable to another because of a fundamental difference in philosophy.

The Manual was prepared to assist in the development of school handbooks. The ideas presented evolved as the consensus of many people who have expended their energies to investigate the resources in their field and to examine co-operatively their own experiences. It is intended, however, to serve only as a guide. The elements of similarity among a number of school systems must be critically examined to validate their application to any particular district. It is anticipated that schools engaging in the development of handbooks will modify, revise, and adapt the material presented in the light of knowledge and views of their own communities. ■

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PERSONAL NEWS

CALIFORNIA

Gale Pattison has been elected assistant superintendent of the Orange unified school district.

DELAWARE

Frank R. Mercer, of Newark, has been elected superintendent at Lewes.

ILLINOIS

Dr. William C. French is the new superintendent of the Joliet township high school at Joliet. He succeeds **James H. Cherry,** who has become superintendent of the Urbana community unit school district.

INDIANA

Wilbur C. Clippinger is the new president of the Evansville board.

MASSACHUSETTS

Eugene P. Melville has been elected administrative assitant to the superintendent at Attleboro.

MINNESOTA

George Elstad has been elected superintendent at Cannon Falls.

NEW JERSEY

Supt. L. Arthur Walton, of Pitman, has been elected president of the New Jersey School Superintendents' Association. **Gilmore J. Fisher** was named president-elect.

Vincent O'Shea has been named acting superintendent at Jersey City.

Paul W. Rossey, of Litchfield, Conn., has been elected superintendent at Scotch Plains.

Carl J. Pecoraro is the new superintendent at Garfield.

David Brittain is the new superintendent at Rutherford.

NEW YORK

Eugene A. Nifenecker, former director of the New York City board's Bureau of Reference and Research, died August 26 in a New York hospital. Mr. Nifenecker, who was 78, had been a member of the teaching staff from 1903 to 1915, when he became assistant director of the Reference Bureau. He was named director in 1920 and served until retirement in September, 1953. He was responsible for the development of the school testing programs and statistical report procedures and he moderned the format of the board budgets.

Mrs. Catharine U. Van Volkenburg is the new president of the board of Bethlehem central district at Delmar.

NORTH DAKOTA

Marion Haahr has been appointed comptroller of the Fargo school board. **Alvin Hella** was named pupil personnel director.

OHIO

S. J. Bonham, superintendent at Niles, has resigned after 39 years' service.

Ralph E. Curie has become superintendent of the Buckeye local district.

Russell DeVault has succeeded **H. B. Waldorf** as superintendent at Bridgeport.

OREGON

O. J. Monger has taken the superintendency at Camas Valley.

TENNESSEE

John Neece has been elected superintendent at Elizabethton.

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NEW BOOKS

The Modern School Superintendent

By R. E. Wilson, Cloth, 232 pp., $4.50. Harper & Brothers, New York, N. Y.

This is the first human-interest book we have seen on the subject of the city school superintendency and of the men who head this high office in American education. The author recognizes the fact that a better professional type of school superintendents is emerging and that they have new conditions and new problems to solve, but that these solutions must be made on the basis of ancient principles of public administration and education. In this book the underlying principles of administration are woven into the discussion without heavy pedagogical terminology and the solemn approach of older theorists. The work is really alive and even dramatic. Definitions and personal viewpoints are woven into the text in a happy, constructive way that at many points are fresh, fearless, and effective. Underlying principles are supported by references to long-accepted practices and illustrated by incidents that carry conviction.

The book should interest young men who are ambitious for careers in education. It should give school board members a better understanding of the chief school executive with whom they carry on the daily business of running a city school system.

In only one or two spots does the author feel sorry for superintendents and their burdensome troubles with school boards, teachers, and school patrons. The work is clearly highly professional and while it seems to be disarmingly simple and informal, it has much homely wisdom and packs a good many wallops in condemnation of present foibles growing out of inconclusive research and association propaganda. It would be interesting if we could have many more books of this kind, written by educators who know their subject well enough not to take themselves too seriously.

Report on National Defense Education Act

Paper, 62 pp., 45 cents. Superinitendent of Documents, Government Printing Office, Washington 25, D. C.

This summary of programs administered by the Office of Education under Public Law 85–864 for 1958–59 indicates that nearly 50,000 young people and adults received training under Title VIII, in highly technical skills in such fields as electronics, electrical technology, mechanical drafting and design, chemistry, instrumentation, electronic data processing, and tool design. Of 1950 institutions of higher education, 1197 participated in the program during 1959. Only $117,337 was borrowed by institutions which could not provide their contribution, leaving available for federal capital contributions a total of $30,882,663. A total of 27,683 loans were reported by institutions which were made to 25,364 students. Out of 20,360 commitments, 11,333 were made to high school graduates. In 1959 a total of $70,000,000 was made available for laboratory equipment and minor remodeling.

The School Bus Law

By Theodore Powell. Cloth, 334 pp., $5. Wesleyan University Press, Middletown, Conn.

This is an extended personal presentation of the struggle which took place in Connecticut between the public school group and the parochial schools, which resulted in legislation and in a court decision favoring bus service to parochial school children as a "service to the children" rather than to the parochial schools.

Summary of Governmental Finances in 1959

Prepared by Robert W. Burgess. Paper, 21 pp., 25 cents. U. S. Department of Commerce, Bureau of the Census, Washington 25, D. C.

This report shows that the governmental revenue in 1959 totaled $134.3 billion, and the expenditures amounted to $146.2 billion, or $11.3 billion more than 1958. For education the amount spent reached $18.3 billion in 1959. Direct federal spending for education in the fiscal year amounted to $836 million, including $599 million for veterans' education benefits. In addition to its spending for education, the Federal Government made payments to state and local governments totaling $826 million in 1959.

Direct expenditure of state and local governments for education totaled $17.5 billion in 1959, up 10 per cent from the previous fiscal year, and equaling $99 per capita. Of the total, $14.3 billion was for local schools, $2.9 billion for institutions of higher education, and $0.3 billion for various educational purposes.

Included in the $14.3 billion total of expenditures for local schools was $3.0 billion for capital outlay. Of this amount, $2.6 billion went for new construction, while the remainder was for the purchase of equipment and of land and existing structures.

State Tax Collections in 1960

Prepared by Robert W. Burgess. Paper, 12 pp. U. S. Bureau of the Census, Department of Commerce, Washington 25, D. C.

This report for August, 1960, shows that the state tax collections for the year 1960 totaled $18.0 billion, an increase of 13.7 per cent from the $15.8 billion collected in 1959. General sales and gross receipts taxes totaled $4,302 million in 1960, or 16.4 per cent more than in 1959. The largest amounts of increase were reported by New York and California, the former up $375 million, and the latter, $312 million. Per capita amounts of taxes ranged from over $150 for 4 states down to less than $80 for 7 states.

for the school planner

Economic Planning for Better Schools

By Benjamin Handler. Cloth, quarto, 107 pp., $5. College of Architecture and Design of the University of Michigan, Ann Arbor, Mich.

While this book emphasizes economy of school planning and construction, it approaches the problem not from the standpoint of cheapness or low cost but from the standpoint of the best service of a building educationally, to children, combined with reasonable cost for a predicted educationally efficient length of life. These two elements of true economy must be coordinated through an effective use of sound capital budgeting. Beyond the need for planning for educational efficiency and for building economy, the author holds that a higher level of comprehensive planning for all aspects of community welfare on the long-range level must be considered.

The author and his associates who made a study of the growth of rural and urban school systems in Michigan and a further study of 285 obsolescent and unsatisfactory buildings, as well as 54 abandoned structures, believe that school buildings should be erected to serve a satisfactory length of life, and while much can be done by measures which they recommend to lengthen the life of classrooms and service systems and assist in economical remodeling and refurbishing, it is definitely unwise to plan areas and to use materials which will outlive the reasonable educational life of a building.

Three chapters of the book make the work particularly valuable for school board members. The chapter on the life cycle of buildings is the best available discussion of the sequence of events in the deterioration of the services and the fabric of school buildings over the twenty and forty years of life culminating usually in practically entire obsolescence at about fifty years. The author's ideas for planning flexible instructional rooms and for installing plumbing, heating, and electrical services so that they can be ripped out and replaced have especially practical economical points of view.

The chapter on planning for emerging educational developments calls for multipurpose classrooms, and for a new approach to planning for individual child and group adult needs.

The chapter on capital budgeting reflects considerable insight into the basic problem of balancing local resources with capital needs. Schoolmen whose political views lean toward complete independence of school financing from city and county, or even state, planning cannot help but be impressed by the author's argument that school programs of capital budgeting must be integrated with the entire municipal financing and taxation and the over-all public works planning. Conflicts, the author holds, should be avoided by developing total plans of community planning and cooperation. Interdependence rather than self-sufficiency is the best way to success. And, it may be added, unreasoning dogmatic views and emotional outbursts do not create public confidence and support.

There is much practical wisdom in the book. It should help redirect some of the thinking of the post war years which has been slightly visionary.

The Cost of a Schoolhouse

A report from Educational Facilities Laboratories. Paper, 144 pp. Educational Facilities Laboratories, 477 Madison Ave., New York 22, N. Y.

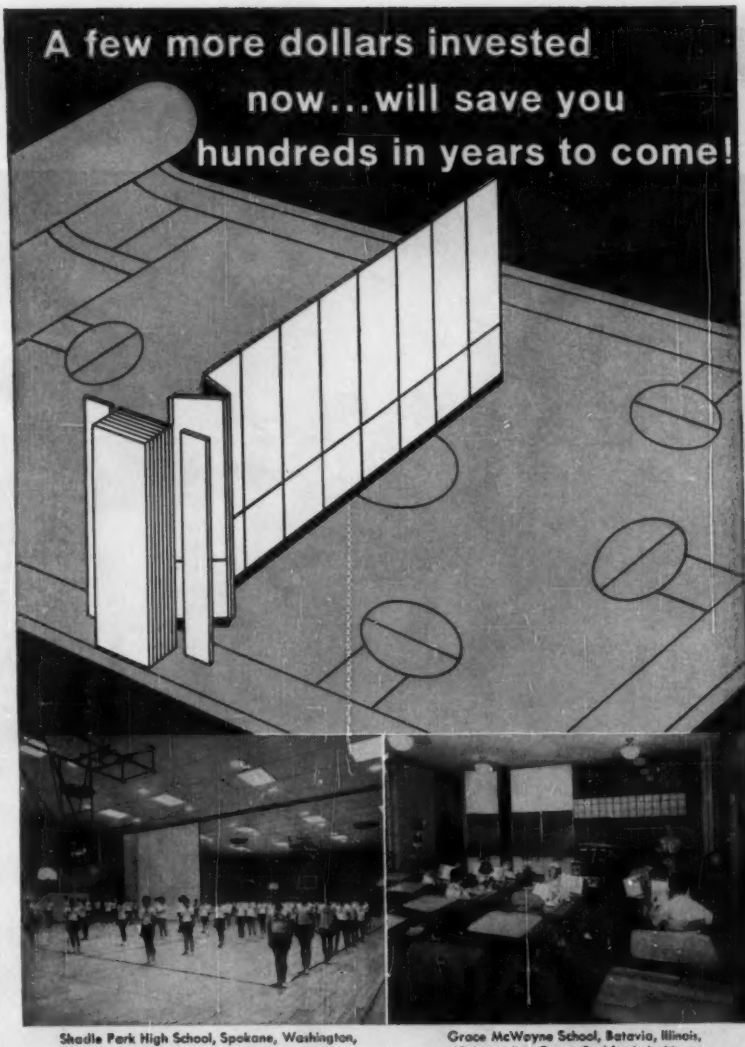
This report embraces the broad topics of the history of school architecture in the United States, the current methods of planning buildings, and desirable administrative changes in planning buildings for the future. The report suggests careful study of all aspects of planning from the original community planning to and including financing, educational planning, planning construction and equipment, and finally the solution of the overall problems of economy as opposed to cheapness. The

point of view is that of educational efficiency for the present and the foreseeable future as the basis of true economy.

The study found that the recent median cost of elementary and secondary school buildings was $15.99 per square foot. Throughout the county there were and are considerable variations in cost due mainly to space allowance per student, program differences, and climatic needs. It is of interest that the study directs its findings to the school boards in 14 recommendations:

1. Anticipate — schools are usually planned too fast.
2. Think first of what you want the school to produce before deciding what to put in it.
3. Don't plan in isolation — your neighbors have the same problem.
4. Don't buy permanence at the expense of performance. Don't saddle us with unchangable schools that will some day "sit beside the road, a ragged beggar sunning."
5. If you're not sure how long the school will be needed, consider high quality, transportable space. If you're wrong, you can recapture your equity — and your equanimity.
6. Don't be afraid of new forms and shapes. Eventually it will be cheaper to get space by scooping a cavity out of the sky, rather than by scooping it out of the earth, or piling up small blocks as the Egyptians did.
7. Plan the building to be a gentle place for children and a machine for learning.
8. Don't spend all your time on the structure — the tools you give the teacher are just as important. A beautiful library with no books jeopardizes our security as a nation. Schools are not to package education but to speed it.
9. Resist stock plans unless you're too busy to work with the educators and the architect. In the long run it will cost you money to order a school through the mail.
10. Watch out how you borrow money. We found a case where a school board paid for one building two and one-half times: once to the contractors, and one and a half times to the bond holders.
11. The best architect costs the same as the poorest — and the difference to your building can be as much as five per cent in cost and one hundred per cent in performance.
12. Encourage imagination in your architect and experimentation in your educator. Don't evade your responsibility for finding answers to some of the unknowns.
13. Don't look at a particular school as the final solution to the housing of education for its neighborhood. The school is but a servant of our changing culture. Let some municipal department build the monuments, while you build the structures that yield willingly to the future.
14. A building is an organic whole and should be designed as a whole from the inside out. Don't fetter the architect by prescribing details before he begins. When he has put the whole together and the details have fallen logically into place, then apply the test of economy.

The unnamed authors urge that all school buildings be planned, as stated above, for educational utility. They warn that there are sharply defined limits to flexibility and that excessive attempts at performance are ultimately wasteful. The report provides a vast amount of practical information on presentday methods of construction, exterior design, overall layout, and specific layout of instructional areas. Perhaps the one most immediately useful section of the book is a brief tabular statement of 21 school building economies now available.



Shadle Park High School, Spokane, Washington, Culler, Gale, Martell and Norrie, Architects

Grace McWayne School, Batavia, Illinois, Raymond A. Orput, Rockford, Architect

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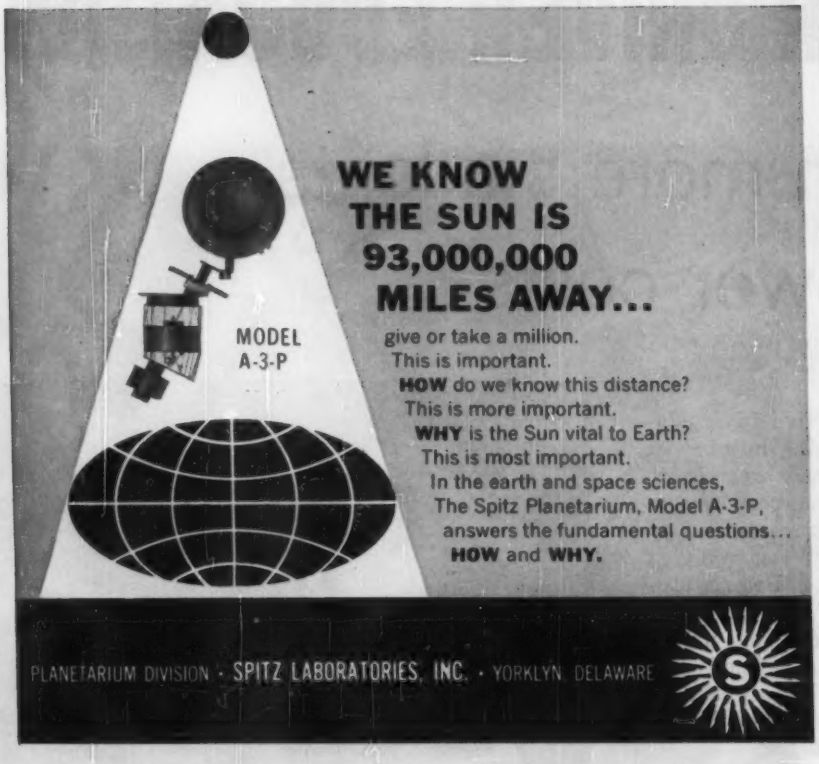

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IMPROVING THE PEORIA SCHOOLS

At the present time when many school districts and their administrators are trying "to make headlines" by popularizing "new ideas" in education, it is interesting that the Peoria, Ill., schools have many of the proposed ideas in practical operation. Long before the tidal wave of national concern about a general upgrading of the schools and improved instruction in such subjects as mathematics and science swept the country, Supt. Mark W. Bills led local studies in curriculum and teaching methods.

During these years, Dr. Bills and his staff worked steadily: (1) the economy of the elementary school grouping was improved and at the same time the pupil-teacher ratio was lowered; (2) obsolescent subjects like personal typing were eliminated; (3) the entire list of textbooks was re-examined by teachers' committees and the watered-down English books were replaced by a better series; (4) a complete study of the curriculum was made and the whole existing instructional plan was tightened; (5) a directive was issued for more homework in the upper elementary grades.

The board of education supported all these procedures strongly and in June, 1957, accepted a motion proposed by Dr. Bills to strengthen the entire work of the high schools by setting up the policy of granting the high school diploma only for work satisfying the new standards set up and giving students who did not qualify "a certificate for the four years' work done" by them. Teachers and principals were asked to study the motion.

In the same year, the board went on record against all "social promotions," and asked Dr. Bills to issue such a directive. In September, 1958, the policy committee submitted a resolution that the board require a passing grade in every subject for every student participating in extracurricular activities representing the school. In spite of the outcry made by athletes and coaches, (this requirement exceeds that of the Illinois High School Association rule, which permits one failure) the motion was passed by the board and is being enforced with good results.

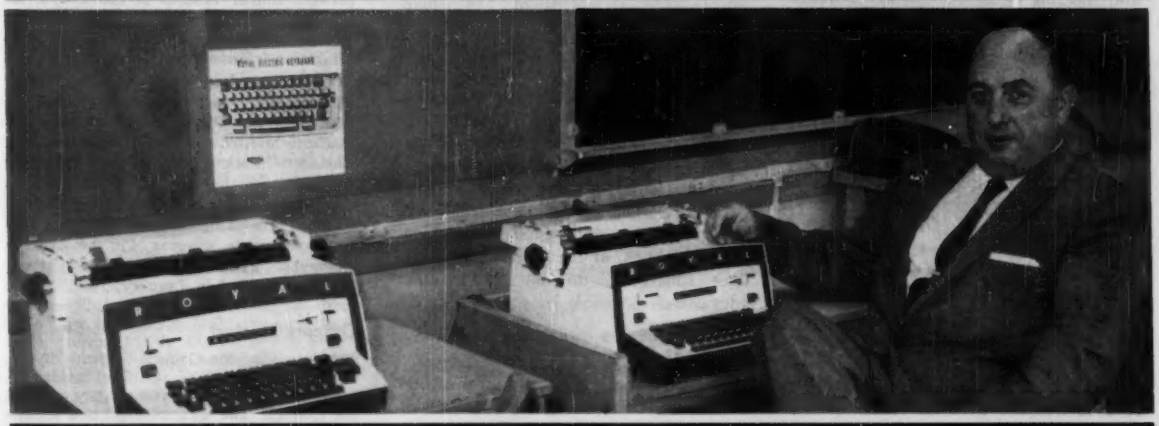
Teacher welfare has not been neglected. In the past two and one-half years a new salary schedule has been set up and twice adjusted. Two over-all salary raises have been given in addition to the $200 yearly increment. The principals are on a merit schedule.

Perhaps most important of all, Dr. Bills has created a new and challenging atmosphere among the principals, assuring them of the complete elimination of political appointments, the strong backing of the board and staff, and continuous encouragement of creative leadership.

— **Mrs. Marietta H. Bloom**
Peoria, Ill., Board of Education

(For more information from advertisers, use the postcard on page 61)

SCHOOL BUSINESS MGR. M. PEARLSTONE



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ASSOCIATION NEWS

NATIONAL COUNCIL'S 34TH MEETING

The thirty-fourth annual convention of the National Council on Schoolhouse Construction in Toronto, Canada, October 3 to 7, will be remembered for the active progress made in the rewriting of the "Guide to Schoolhouse Planning and Construction," and even more so for the insights which the Canadian local officials provided into the magnificent achievements of the local school systems in the Toronto Metropolitan area, particularly in solving the problems of school plant planning and remodeling. The visitors from the States could not help but be impressed by the over-all services rendered to the 13 independent school districts by the Metropolitan School Board and the high quality of the newer school buildings, their adaptability to the school programs and the fine types of lighting and heating and ventilating systems. The convention city provided warm hospitality and excellent meeting facilities and ideal weather conditions. The Council refused by a plurality vote to change its name in spite of the fact that considerable interest had been expressed in a referendum vote for a change. Arnold Tjomsland of Olympia, Wash., was advanced to the presidency. Dr. Floyd Taylor, East Lansing, Mich., was elected secretary-treasurer after Dr. W. D. McClurkin refused re-election. The Council affirmed its traditional stand in favor of federal aid for schoolhouse construction, the funds to be handled through the state education departments. The next convention will be held October 1961, at Atlanta, Ga., and the invitation of Denver, Colo., for the 1962 meeting was accepted.

Toronto School System Explained

The unique organization of the Toronto Metropolitan Council, as explained by its chairman Frederick G. Gardiner, Q.C., embraces not only over-all construction of highways, sanitation, and other services but is responsible for subsidizing and expediting the erection of school plants planned and operated independently by 13 school districts, including the Toronto schools. Since 1954 the Metropolitan board has supplied $168 million for 144 new school buildings and 195 additions to old schools. As discussed further by W. J. McCordic, business manager of the Metropolitan School Board, the Board has been able to help the local town and municipal boards of education to catch up to the needs of an explosive population. Especially valuable has been the equalization of the financial situation through the sale of debentures, the establishment of standards of building sites, a formula for support of minimum costs, and the expediting of the whole process of planning and erecting new buildings. More than 40 per cent of all children in Toronto area are in new school buildings or equivalent structures.

The Hon. Mr. J. P. Robarts, Minister of Education for the Providence of Ontario, outlined the aid given by the Province (state) to the local municipalities, in the amount of $25,000 per classroom in secondary schools and $20,000 per room in elementary schools. The Provincial Education Office (1) gives approval of projects when needs are shown, (2) examines preliminary plans and suggests modifications, (3) approves final plans from the standpoint of educational adaptability, fire, health, and constructional safety, (4) gives final approval of debentures and makes grants in aid. The Ministry favors 20-year debentures. It requires local boards of education to meet Provincial standards of (*a*) economy of spaces, (*b*) standards of 725 square feet per classroom, (*c*) space for 35 elementary and 30 high school pupils per room, (*d*) auxiliary areas of less than 50 per cent of classroom areas in elementary schools, and 60 per cent in secondary schools. The Ministry is particularly concerned that local boards keep up with the explosive growth in population, provide centralized schools, transportation, and good instruction. Fine buildings, of themselves, the Minister concluded, do not insure good education.

Excellent Tours

Under the direction of local chairman, Fred C. Etherington, the Council members enjoyed genuinely inspiring tours to (1) Etabicoke, a rapidly growing suburban area which has completed a fine collegiate institute (senior high school) and a senior school (junior high school) as well as a model board-of-education building; (2) North York, an explosive industrial suburb with several new elementary and senior schools, and a collegiate institute, (3) Scarborough, an industrial suburb, (4) and Toronto itself, which has spent some $36 million for remodeling and enlarging schools in its older sections and has put up several exceptionally fine collegiate institutes. On Thursday afternoon, J. M. Charlton, Superintendent of Maintenance of the Toronto school system, led a tour of new and remodeled school buildings, which illustrated the results of some five years of research in classroom illumination. The rooms also effectively illustrated the recommendations of the Joint Committee on Lighting as outlined to the Council by Charles D. Gibson, chairman of the Council's committee.

President Arnold C. Tjomsland

Revision of Guide

On Tuesday afternoon and Wednesday morning, the 105 active members in attendance were divided into 30 working groups. As directed by Dr. A. E. Wohlers, chairman of the Research and Publications Committee, each group was assigned three or four specific points in school planning to be developed in outline form for final formulation by the R & P Committee. Prof. Stephen J. Knezevich of the State University of Iowa, chairman of the Professional Training Committee, asked for suggestions for accrediting school plant experts.

In an address Wednesday morning, Dr. A. B. Shaw, editor of Overview, urged that the mistakes of the 1950's should help prevent similar failures in the 1960's. He argued particularly the dangers of low levels of cheapness and insisted that high utilization is not necessarily high efficiency.

The long, drawn-out study of school illumination, which has been carried on jointly by the Council with the American Institute of Architects and the Illuminating Engineers' Society, promises to be completed before the end of the year. Joint Chairman Charles D. Gibson of the Council reported on Thursday morning that a final committee meeting will be held in November and that the printed report may be expected in January, 1961.

Officers Elected

After giving the Council 14 years of efficient service, Dr. W. D. McClurkin refused re-election as secrcetary-treasurer of the Council. The Council expressed its appreciation of Dr. McClurkin's unselfish work by informal resolutions and a handsome gift of silver.

The officers elected for the 1960–61 year are:

President, Arnold C. Tjomsland, director of School Plant Facilities, Washington State Board of Education, Olympia.

Vice-President, J. L. Taylor, Specialist in Schoolhouse Planning, U. S. Office of Education, Washington, D. C.

Secretary-Treasurer, Floyd G. Parker, Assistant Professor of Administrative and Educational Services, Michigan State University, East Lansing, Mich.

Member of Executive Committee, A. B. Grimes, State Department of Public Instruction, Des Moines, Iowa.

Although the Council has sparked a considerable amount of research and interchange of professional information on school plant planning and construction, there was considerable demand in the remarks of members and in the reports of committees for (1) more research, (2) reports of completed research, (3) interchange of information, (4) mutual help in the solution of problems, and (5) a newsletter.

THE SCHOOL SCENE

(Concluded from page 8)

high school students and some elementary pupils to move out of segregated schools, the board will put an end to the feeling of being "in" and "out." The freedom to choose to go elsewhere, it is felt, will have an effect not only on those who go, but also on those who elect to stay. The plan means that the schools will have to carry the burden and expense of large-scale bus transportation. It is expected that 3000 children will be transferred this school year and that the number will increase to 15,000 in future years.

■ Houston, Tex. The nation's largest segregated school system opened theoretically integrated, but Negro students were not notified until later if they had been accepted. The board voted to allow Negroes to enroll in first grades of all-white schools but delayed their admission until a later date. The decision prevented seven Negro pupils from attending opening classes.

■ Roanoke, Va. The school board has filed an answer to the U. S. District Court in denying a charge that 28 Negro pupils were denied transfers to white schools because of their race. A suit seeking transfer of the students was filed by Attorney Reuben L. Lawson, who contended that Roanoke maintains a segregated school system in violation of the court order.

CAROLINA COUNTIES CONSOLIDATED

A significant thing has occurred in Charlotte and Mecklenberg County, N. C., with the consolidation of the two school systems into one system in July, 1960. Charlotte is the largest school system in the state and Mecklenberg is the second largest. The consolidated system provides a total school population this year of 60,000 children and 2400 teachers and principals. The vote in June, 1959, was 4 to 1 in favor of the merger. Some good results will follow. The buildings will be used to better advantage; better planning will be done in the use of existing buildings and those to be constructed in the future; a better use of the school staff is possible; a new salary scale will be adopted; and a uniform pupil cost system for the entire county will be approved.

"DUOLINGUAL" TEENS

Public high schools are becoming more interested in the study of modern foreign languages, particularly Spanish, according to Commissioner of Education Lawrence G. Derthick.

A survey of language offerings and enrollments, made for the U. S. Office of Education in 1958–59, showed that 1.3 million or 16.5 per cent of all high school students are taking one foreign language. This compares with 14.2 per cent in 1954–55. It also showed that in 1958–59, 50.4 per cent of all high schools offered at least one modern foreign language, an increase from the 43.6 per cent of 1954–55. Spanish attracted enrollments of 691,931, or 8.3 per cent of the students; French 480,347, or 6.1 per cent; German, 97,644, or 1.2 per cent; and Italian, 22,133, or 0.3 per cent.

SCHOOL BOND SALES

During the month of August, 1960, school bonds were sold in the amount of $151,664,500. The largest sales were California, $18,517,000; New York, $21,026,000; Texas, $20,970,000. The average yield as of September 2 was reported by the Bond Buyer as 3.33 per cent.

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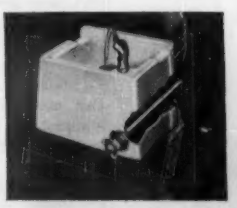

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No exposed fittings. Fits tight against the wall. Space-saving!

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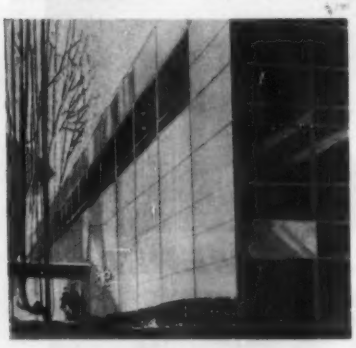
NEWS of PRODUCTS for the Schools

LIGHTWEIGHT WALL SYSTEM

A new panel wall system, called Stran-Wall, has been designed for one and two-story structures by the Stran-Steel Corp., a division of the National Steel Corp., Detroit 29, Mich. The panel system is a



No Heavy Beams

lightweight load-bearing steel structure, which eliminates the need for heavy structural beams and columns. Colorful porcelain curtain wall panels slip into slots and grooves in the steel framing, which is quickly and easily assembled by welding or self-tapping screws. Aluminum extrusions, mullions and jambs, and attachments, can be snapped or screwed to the structure. Send for information on the complete line of architectural steel products, including the new color coated steel wall panels in a choice of nine shades.

(For Further Details Circle Index Code 0177)

SINGLE-LEVER DUPLICATOR

The Wolber Duplicator & Supply Co., Chicago 14, Ill., has introduced the Golden Streak Copy-Rite spirit duplicator. By simply depressing one lever, the master is clamped, fluid released, rollers engaged, feeding starts, and copy is delivered. The duplicator stops automatically when the paper load has been exhausted. A margin adjustment raises or lowers reproduced copy to desired position while the duplicator is operating. When the run is finished, a flashing light reminds the operator that the current is still on. The duplicator, measuring 16 by 24 in., is finished in surf green baked enamel.

(For Further Details Circle Index Code 0178)

All-Automatic Operation

WALL-HUNG WATER COOLER

The Temprite Products Corp., Birmingham, Mich., now produces Wall-Temp drinking water coolers in two capacity ratings: Models WT-6 and WT-13 deliver six and 13 gallons per hour respectively. The cooler mounts flush to the wall at normal 40 in. bubbler height, with a 17 in. clearance from the floor, providing easy maintenance. The unit can also be

Anti-Splash Basin

mounted at any desired lower height for children. The new model measures 15¾ in. wide by 13 in. deep at the top, recessed to nine in. deep at the bottom. Over-all height is 24 in. The cooler, of contoured stainless steel, is finished in mist gray.

(For Further Details Circle Index Code 0179)

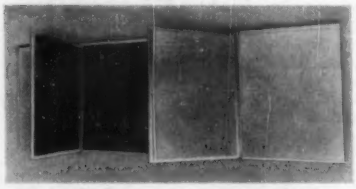
DRILL PRESS FOR SCHOOL SHOP

A new low-priced 17 in. drill press for the school shop operates with improved precision and safety, according to the Delta Power Tool Division, Rockwell Mfg. Co., Pittsburgh 8, Pa. Suitable for both wood and metalworking, the drill press has a nominal capacity of ⅝ in. diameter holes in steel, ¾ in. in cast iron. The new drill press is the first to provide an internal depth stop with long spindle travel of 5 in. Easily adjusted in seconds with one hand, the stop mechanism consistently repeats to the same depth and stays locked. Depth scale is calibrated down to 1/16 in. with double magnification for easy reading. Many convenient and safety features are included in the press, which is available in hand or power feed models.

(For Further Details Circle Index Code 0180)

PIVOTING WALL PANELS

A Multi-View wall mounted panel has pivoting sections of chalkboard, tackboard, or a combination surface. The system has been developed by the Son-Nel Products Co., Oakland 6, Calif. An optional white



Several Surfaces

porcelain-enameled steel section serves as a projection screen. Individual panels are available in a wide selection of matching or contrasting colors. All sections are four ft. high in varying widths of 12, 16, or 24 ft. The frame, trim, and chalk tray are anodized extruded aluminum.

(For Further Details Circle Index Code 0181)

PLASTIC TOTE TRAYS

Hollywood Plastics, Inc., Los Angeles 63, Calif., manufacturer of thermoplastic tote trays, announces a new low-priced line for classroom use. The new Thriftline tote trays fit pre-manufactured school cabinets. Lightweight and seamless with smooth surfaces and modern design, the polystyrene trays will withstand years of rugged classroom use, according to the manufacturer. The trays come in seven sizes, in desert tan and other decorator colors. Send for further information.

(For Further Details Circle Index Code 0182)

BUILT-IN SHELF SUPPORTS

Reading rooms in the new public library at Bell, Calif., feature adjustable shelves with metal supports, concealed between wood-grained wall panels, which extend above and behind the shelf areas. The shelves are fastened on brackets which

In Wood-Grained Panels

are slipped into thin perforated strips between the 2-ft. wide grooved panels. The brackets can be moved to different perforations for any height shelf. Made by the Masonite Corp., Chicago 2, Ill., the Panelok system is available from lumber dealers.

(For Further Details Circle Index Code 0183)

CORRESPONDING CODE INDEX NUMBERS TO BE ENCIRCLED CAN BE FOUND ON THE CARDS IN THE READER'S SERVICE SECTION

LOW-COST LANGUAGE LAB

A new portable language laboratory system by Switchcraft, Inc., Chicago 30, Ill., consists of components that can be put into operation immediately at minimum cost per student. The control center of the laboratory is the Student Amplifier, Model 680. The unit includes a microphone and

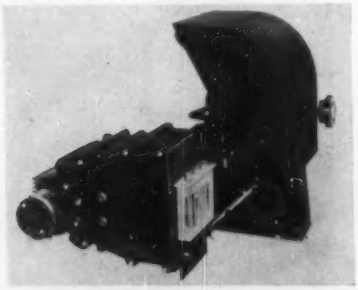
Fits Any Space

headphone jacks with separate volume controls on the front panel. The back panel contains dual three circuit jacks for the power supply and program source, for an unlimited number of student amplifiers. Optional accessories are available to adapt the laboratory to the present audio or language system of any school.

(For Further Details Circle Index Code 0184)

SCIENCE PROJECTOR

A new style projector, the Act-O-Matic, operates in both horizontal and vertical positions. When vertical, the projector can show actual test tubes, electrolysis cells, meters, electroscopes, and other science apparatus. The demonstration is projected live on the screen in full color and motion. Horizontal position converts it to a



Vertical or Horizontal Use

standard overhead projector which shows five by five in. transparencies. A writing attachment allows class notes and diagrams to be projected as they are written. Reversable action enables the instructor to turn back to previous notes on a 100 ft. roll of reusable film. Send for full information from the Laboratory Furniture Co., Inc., Mineola, L. I., N. Y.

(For Further Details Circle Index Code 0185)

(Continued on page 58)

CORRESPONDING CODE INDEX NUMBERS TO BE ENCIRCLED CAN BE FOUND ON THE CARDS IN THE READER'S SERVICE SECTION

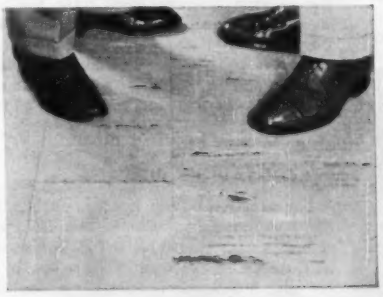
ACME CHEMICAL?

they're on our honor roll

One of the really good firms I've dealt with in my 22 years as a schoolman.

Acme Chemical are *manufacturers.* They control what they make, from start to finish, so they *know* just what each product will do for us. We've always found Acme Chemical products performing exactly as we were told they would.

Take this floor. It's protected by Saber®. Saber is Acme Chemical's new resin emulsion floor coating. They worked on it for years before they sold a gallon of it. Told us it would outwear any coating we ever used — and it does! When was it put down? A year ago — and it's still on the floor. Looks like it was put down yesterday, doesn't it? Performs for us just as our Acme man said it would.



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ACME Chemical Company

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Milwaukee 45, Wisconsin

Maintenance materials for the School Building . . . serviced to your satisfaction

News of Products . . .

(Continued from page 57)

STURDY CAFETERIA TABLE

A mobile, folding, cafeteria table has been introduced by Howe Folding Furniture, Inc., New York 16, N. Y. The Model TN-R table has auxiliary, rubber-tipped legs, which grip the floor automatically as the table is opened, preventing the table from rolling on its casters. Because of

Allows Extra Leg Room

these fixed legs at each end, center legs have been eliminated, allowing additional leg room and eliminating the teetering sometimes found in six-legged tables. The tables come with plastic laminated tops and cadmium-plated legs. The models, each 30 in. wide, are available in lengths of 12, 10, 8, and 6 ft.

(For Further Details Circle Index Code 0186)

MAGNETIC CONTROL BOARD

Magnetic control boards, by the Methods Research Corp., Staten Island 5, N. Y., allow instant changing of visual records for schools, dormitories, and hospitals. The control system consists of a 24 by 36 in. steel board which holds colored magnets, magnetic card holders, acetate tape and

Adjustable Visual Records

colored bars for charts and graphs, circular identification stickers, and magnetic arrows. The board is finished in gray and framed in polished aluminum. Send for an illustrated brochure. In Winston-Salem, N. C., the school superintendent's office uses a magnetic board to show the placement of all teachers in the school system, as is shown in the picture above.

(For Further Details Circle Index Code 0187)

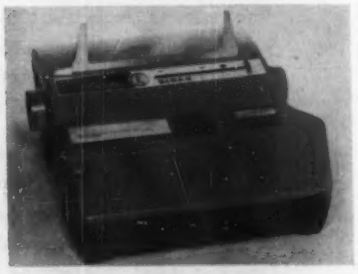
ALL-STEEL BOOKCASE

A new six-foot, all-steel bookcase unit by the Grade-Aid Corp., Nashua, N. H., is equipped with a choice of five adjustable bookshelves, or four bookshelves and a tilted magazine shelf. Both the book and magazine shelves can be moved up or down on one-inch centers for various sized volumes. Extra magazine shelves may be specified in place of the book shelves. Appropriate for the classroom or library, the bookcase may be set against the wall, free standing, or back to back, used as a room divider. The bookcase measures 72 in. high, 11 in. deep, and is available in two widths, 36 in. or 48 in., in tan or gray enamel. Send for further information.

(For Further Details Circle Index Code 0188)

"CONSTRUCTED ANSWER" TEACHING DEVICE

Students deal with subject matter in a step-by-step procedure using the new automated teaching device by the Rheem Califone Corp., Hollywood 38, Calif. To insure correct answers, additional information or prompts are given in a "clue" shutter, which may be eliminated when



Provides Answer Clues

not desirable. Housed in a steel and Royalite case, the DIDAK 501 includes a reference card holder, positive automatic indexing of each teaching item, three teaching item aperture sizes, separate paper transport and answer-space shutter controls, and an overload safety feature on drive knobs to prevent damage to internal mechanism.

(For Further Details Circle Index Code 0189)

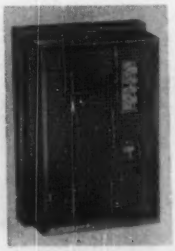
WATER-SAVING FITTINGS

The new Easy Push lavatory fittings by the Speakman Co., Wilmington, Del., are equipped with adjustable self-closing valves that reduce water consumption up to 25 per cent. A built-in metering device supplies a regulated flow of tempered water. The same kind of metering device is also available on a pushbutton handle urinal flush valve. Ideal for schools and other institutions where water is at a premium, the Easy Push faucet is operated by gently depressing a lever-type handle with the fingertip. A predetermined amount of water, varying from a dash to 1½ gals., flows from the faucet and then shuts off automatically. The fittings may be installed on any fixtures, old or new. Send for further information.

(For Further Details Circle Index Code 0190)

ROOM THERMOSTATS

The Barber-Colman Co., Rockford, Ill., has announced a new line of versatile and attractively styled thermostats. Mounted on a sturdy bakelite base, the thermostats are enclosed by a die-cast cover frame with a textured metal face



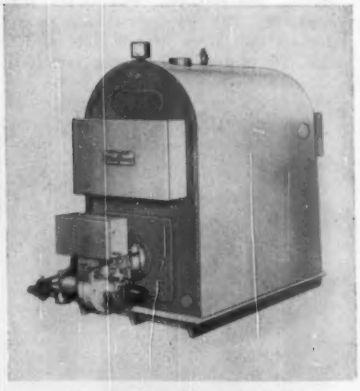
Decorative Metal Controls

plate. The sensitive bi-metal type thermometer features a round easy-to-read, set-point dial with one degree gradations. The units come in two versions, light or medium duty, defined by electrical ratings. Champagne gold finish, polished chrome covers, or textured metal face plates are available.

(For Further Details Circle Index Code 0191)

COMBINATION BURNER-BOILER

The steam or hot water requirements of medium-size schools can be filled with one burner and one boiler, precision-locked in combination and ready for immediate installation. This burner-boiler package by Iron Fireman Mfg. Co., Cleveland 11, Ohio, comes in 12 sizes. Called the WhirlPower, it can be fueled either by gas or oil or



Comes Ready to Install

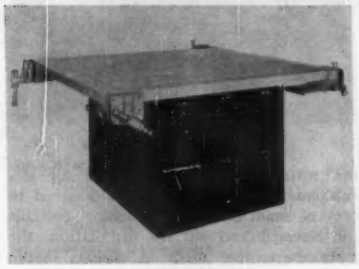
gas-oil, as desired. The new package generator features more than 80 per cent firing efficiency, and low "standby loss." Maintenance is reduced because no refractory combustion chamber is needed. No high exhaust stacks are needed. The generator comes in one assembled package with burner mounted and wired. Installation has been further simplified in some sizes by reducing the high conventional boiler base by as much as 36 in.

(For Further Details Circle Index Code 0192)

CORRESPONDING CODE INDEX NUMBERS TO BE ENCIRCLED CAN BE FOUND ON THE CARDS IN THE READER'S SERVICE SECTION

SCHOOL SHOP FURNITURE

A complete line of school shop benches, lockers, cabinets, stools, and accessories is offered by Angle Steel, Inc., Plainwell, Mich., builders of school and shop equipment. Greater flexibility in laying out school shops is allowed with modern base units which may be combined in many ways because they are all the same depth and height. Locker type bases are equipped with spring hinges for safety. These reinforced, all-welded steel bases are finished in hard, baked-on enamel. Large, overhanging bench tops are 2¼ in. laminated hard maple, securely glued and bolted. Send for a free catalog of equipment for woodworking, welding, electrical shop and drafting furniture.

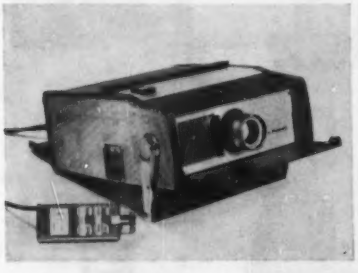


Four-Student Bench

(For Further Details Circle Index Code 0193)

REMOTE CONTROL FOCUSING

Slides can be focused, as well as changed, remotely with the new Focus Tronic Explorer projector by Bell & Howell, Chicago 45, Ill. Pressing the remote control button moves the lens in or out for sharp focus. The focusing unit also contains the Pointer-Ray, a beam of light for pointing out details on the screen. Slides can also be changed in forward or reverse sequence. Additional features of the projector include a film editing guide, a built-in timer, 500-watt illumination, and a blower cooling with exhaust from the side. Model 754RF is constructed of lightweight steel, finished with black-grained vinyl and polished aluminum trim. A carrying bar serves as the front tilt support.



Built-in Pointer-Ray

(For Further Details Circle Index Code 0194)

(Concluded on page 60)

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We are pleased to announce that

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Formerly superintendent of schools

Arcadia, California

has joined us as

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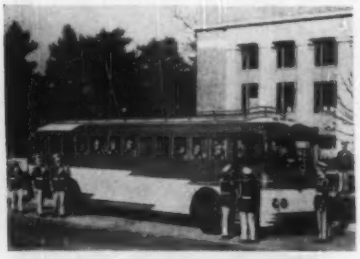
(For more information from advertisers, use the postcard on page 61)

News of Products . . .

(Concluded from page 59)

DOUBLE USE FOR SCHOOL BUS

Using school buses, resembling public transit buses, for full-time transportation could offer savings of up to 50 per cent to small and medium-sized cities, according to William Manley of the Wayne Bus Division of Divco-Wayne Corp. The school bus could be used during school hours,



For School and Community

when it is usually idle and during summer vacations for full-time transportation of adults or for special charter service. Unlike the familiar, long-nosed yellow school bus, the new School Bus Transits are flush fronted, with rear engine design and wide-view windows. Because they have larger seating capacity, fewer school buses are needed. From a public transportation viewpoint, the buses may cost up to $10,000 less than the heavier city buses.

(For Further Details Circle Index Code 0195)

SCHOOL SUPPLY VENDER

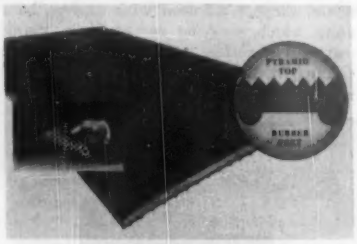
Students can buy their own notebook paper, pencils and ballpoint pens from this convenient, coin-operated vender. Vender is furnished by School Supply Service Co., Chicago 28, Ill., an affiliate of Franklin-Lee Co. The firm stocks it with a good quality notebook paper in 25 and 10 cent sizes, five-cent pencils, and 25-cent ballpoint pens. The company services the machine and bills the school monthly; school keeps 20 per cent of all receipts. Vender measures 27½ in. wide, by 15¾ in. at base, by 53 in. high; weighs 110 lbs. Trial demonstrations can be arranged.

(For Further Details Circle Index Code 0196)

CORRESPONDING CODE INDEX NUMBERS TO BE ENCIRCLED CAN BE FOUND ON THE CARDS IN THE READER'S SERVICE SECTION

CUSTOM MADE MATS

Perforated mats for building entrances and lobbies have been designed by the R. C. Musson Rubber Co., Akron 6, Ohio. An easy-to-clean pyramid surface provides safe foot traction, while rubber feet under



Will Not Catch Heels

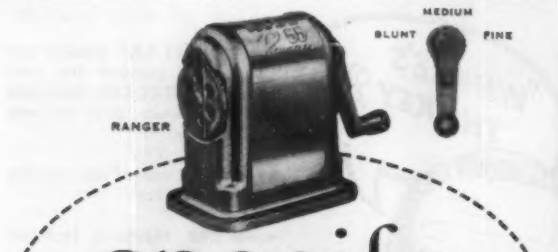
the surface allow drainage and air circulation. The perforations are designed to prevent small heels from catching. Suitable for recessed and surface installation, the mats are custom made in various shapes such as cloverleaf, round, hexagonal, or rectangular.

(For Further Details Circle Index Code 0197)

BOOKLET

Astro-Dome, Inc., Canton 5, Ohio, has developed the Astro-Domette, a molded Fiberglas dome which comes in dimensions of 8, 10 and 12 feet. The moderately priced dome has been developed to teach astronomy in high schools and junior colleges. Send for a copy of "For a Brighter Future in Education."

(For Further Details Circle Index Code 0198)



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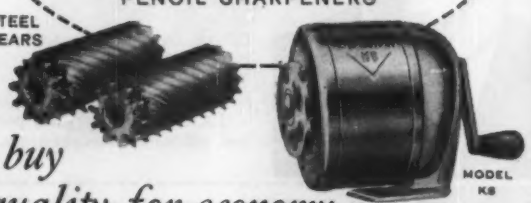

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INDEX TO SCHOOL EQUIPMENT

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Code No.		Page No.
1110	**Acme Chemical Company** Maintenance materials	57
1111	**Alsto Company** Low cost incinerators	52
1112	**American Playground Device Company** Playground and swimming pool equipment	46
1113	**American Seating Company** School seating	ins. bet. 8 & 13
1114	**Booz, Allen & Hamilton** Management consultants	59
1115	**Doerr Glass Company** Laboratory glassware	1
1116	**Hillyard Chemical Company** Maintenance supplies	43
1117	**Hunt Pen Co., C. Howard** Pencil sharpeners	60
1118	**International Business Machines Corp.** Electric typewriters	7
1119	**Maple Flooring Manufacturers Assn.** Northern hard maple	2nd cover
1120	**Medart Products, Inc., Fred** Telescopic gym seats	4th cover
1121	**Minneapolis-Honeywell Regulator Company** Temperature controls	44 & 45
1122	**Moore, Inc., P. O.** Key control systems	59
1123	**New Hermes Engraving Machine Corp.** Engravograph	6
1124	**Owens Illinois: Kimble Glass Co. Sub.** Glass block	2
1125	**Pittsburgh-Des Moines Steel Company** Steel deck grandstands	4 & 5
1126	**Planetaroum Division, Spitz Laboratories** Planetariums	52
1127	**Premier Engraving Company** Engravers	60
1128	**Richards-Wilcox Mfg. Co.** Folding partitions	49
1129	**Robbins Flooring Co.** Hard maple flooring	8
1130	**Rockwell Mfg. Co. Divotrainer Div.** Driver education	50 & 51
1131	**Royal Typewriter Co. Div. Royal McBee Corp.** Electric typewriters	53
1132	**Safway Steel Products, Inc.** Telescoping gym seats	47
1133	**Sheldon Equipment Co., E. H.** Science furniture	3rd cover
1134	**Shwayder Brothers, Inc.** All steel folding chairs	41
1135	**Taylor Company, Halsey W.** Drinking water equipment	55
1136	**Wells Lumber Co., J. W.** Northern maple	46

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These cards are provided for the convenience of THE AMERICAN SCHOOL BOARD JOURNAL readers in requesting information on products, services, booklets, and catalogs offered by the advertisers in this issue.

THE AMERICAN SCHOOL BOARD JOURNAL
400 North Broadway, Milwaukee 1, Wis.

November, 1960

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ADVERTISING INDEX
1110 1112 1114 1116 1118 1120 1122 1124 1126 1128 1130 1132 1134 1135 1136
1111 1113 1115 1117 1119 1121 1123 1125 1127 1129 1131 1133

NEWS OF PRODUCTS FOR THE SCHOOLS — BOOKLET
0177 0179 0181 0183 0185 0187 0189 0191 0193 0195 0196 0197 — 0198
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1111 1113 1115 1117 1127 1129 1131 1133

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READER'S SERVICE SECTION

(Continued)

Code No.		Page No.
	NEWS OF PRODUCTS FOR THE SCHOOLS	
0177	**Stran-Steel Corp., Div. of National Steel Corp.** — Wall system	56
0178	**Wolber Duplicator & Supply Company** — Duplicator	56
0179	**Temprite Products Corp.** — Water cooler	56
0180	**Delta Power Tool Div., Rockwell Mfg. Co.** — Drill press	56
0181	**Son-Nel Products Co.** — Wall panels	56
0182	**Hollywood Plastics, Inc.** — Tote trays	56
0183	**Masonite Corp.** — Shelf supports	56
0184	**Switchcraft, Inc.** — Language lab	57
0185	**Laboratory Furniture Co., Inc.** — Science projector	57
0186	**Howe Folding Furniture, Inc.** — Cafeteria table	58
0187	**Methods Research Corp.** — Magnetic board	58
0188	**Grade-Aid Corp.** — Bookcase	58
0189	**Rheem Califone Corp.** — Teaching device	58
0190	**Speakman Co.** — Fittings	58
0191	**Barber-Colman Co.** — Thermostat	58
0192	**Iron Fireman Mfg. Co.** — Burner-boiler	58
0193	**Angle Steel, Inc.** — Bench	59
0194	**Bell & Howell.** — Slide projector	59
0195	**Wayne Bus Div., Divco-Wayne Corp.** — School bus	60
0196	**School Supply Service Co.** — Vender	60
0197	**R. C. Musson Rubber Co.** — Mats	60
	BOOKLET	
0198	**Astro-Dome, Inc.**	60

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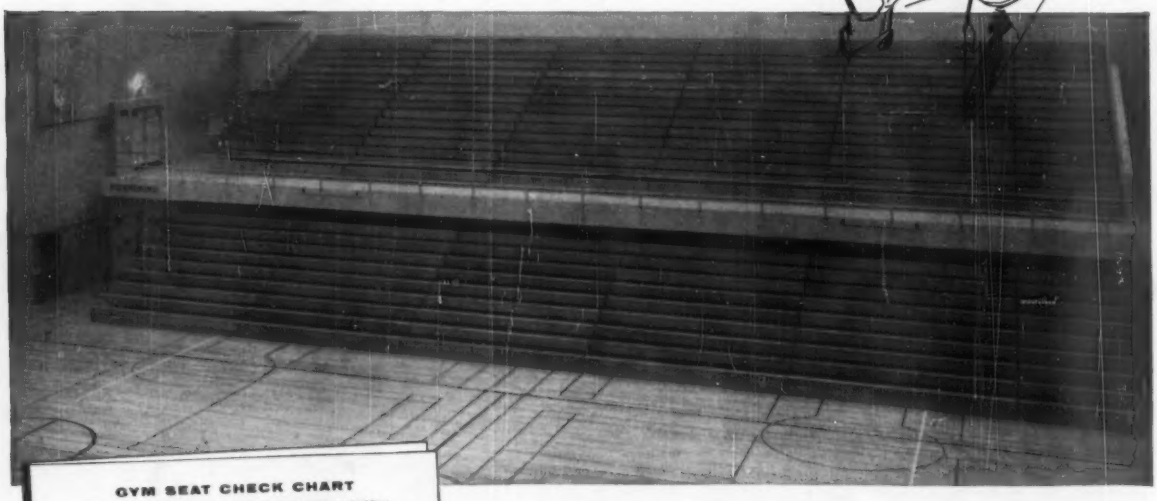
(For more information from advertisers, use the postcard on page 61)

WHAT DO YOU WANT besides price when you specify or buy GYM SEATS?



GYM SEAT CHECK CHART

An easy "Do-It-Yourself" scoresheet for comparing the deciding features of various makes of bleacher-type gym seats.

Check these important design and construction factors before selecting any gym seats, whether they be folding or telescopic, to obtain the maximum in safety, service, ease and convenient operation, and minimum maintenance.	Enter the names of gym seats under consideration and mark YES or NO in spaces provided				
					MEDART
1 Are fronts of seats perfectly vertical when closed to safeguard against accidents and to permit flush receiving?					
2 Do seats operate on a telescopic principle, completely free of locking members? (See Fig. 2)					
3 Are seats designed and constructed independent of trouble, seats, multiple linkage, levers and pins? (See Figs. 1, 2, 3 & 4)					
4 Is steel understructure free-standing and self-supporting, independent of wall anchorage and floorboards? Wood members should add to strength of understructure, and never to afford stress. (See Fig. 1)					
5 Has each full length seat unit at least four vertical uprights to support a capacity load in complete safety? (See Fig. 1)					
6 Are uprights properly staggered to avoid overlanding of standard flooring? (See Fig. 1)					
7 Are uprights interlocked at top and bottom to assure straight line, non-binding opening and closing? (See Figs. 3 & 4)					
8 Are all supporting uprights equipped with two permanently lubricated rubber-tired rollers? (See Fig. 1)					
9 Are rollers enclosed in steel housings as an extra precaution against possible accidents, and to protect against excessive accumulation of dust and debris? (See Fig. 1 & 4)					
10 Do rollers retract into steel housings when seats are under low load or seats are locked safely in position? (See Fig. 1)					
11 Are lower row uprights equipped with two non-slip rubber pads to lock seats in any position? (See Fig. 1)					
12 Is each seat board skinned slightly backward for maximum comfort?					
13 Do wood members have an even-toned, mechanically applied, alkyd melamine varnish finish, which has an even greater wear resistance than ordinary gym seat finishes?					
14 Can any number of seats be opened and safely locked in position, or are whole all others closed? (See Fig. 4)					
15 Do seats require maximum floor space when closed?					
16 Can seats readily be locked per your requirements, without alterations to seat boards?					
17 Can seats be equipped with accessory hinged cap rails to prevent lodging of handbooks, etc.?					
18 Are movable seats equipped with an integral cylinder lock, which is concealed and operated at the floor?					
19 If seats are to be power-operated, is power unit of positive action type, completely free of floor friction drive?					

Courtesy of FRED MEDART PRODUCTS, INC., 3530 DeKalb Street, St. Louis 18, Mo.

GET YOUR COPY

A gym seat check chart that will help you in making impartial comparisons of features and values. No obligation—just MAIL THE COUPON.

GREATER SAFETY? Medart seats have it—compare them with others! Self-supporting steel understructures, *plus added strength* of wood members, support over 400 pounds per foot of seating space.

Four dual *vertical* uprights for *each* 16'0" seatboard. Two rollers on each upright retract and place load on floor, not walls or casters.

MORE SEATING? Medart 16-foot seat sections up to 12 rows high use only 32½" of floor depth when closed. *Better seeing* is assured with a choice of 17" or 18" seat heights. Ample toe *and heel* space add to comfort of spacious seat room.

EASIER OPERATION? Floating telescopic seat supports and interlocked twin rollers under each upright assure easier opening and closing; prevent binding and damage.

LESS UPKEEP? Harder, tougher clear wood finish lasts up to 15 times longer. Vertical fronts collect less dust. Swing-up front riser makes sweeping of debris quick, easy. Also, rubber rollers won't mar finely finished floors.

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Organization.....

Street Address.....

City.....Zone.....State.....

Sharply competitive in price, Medart Telescopic Gym Seats offer a host of exclusive features that promise savings in money, better performance, extra years of service.

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